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THE OIL WEEKLY

OIL & GAS ENGINEERING

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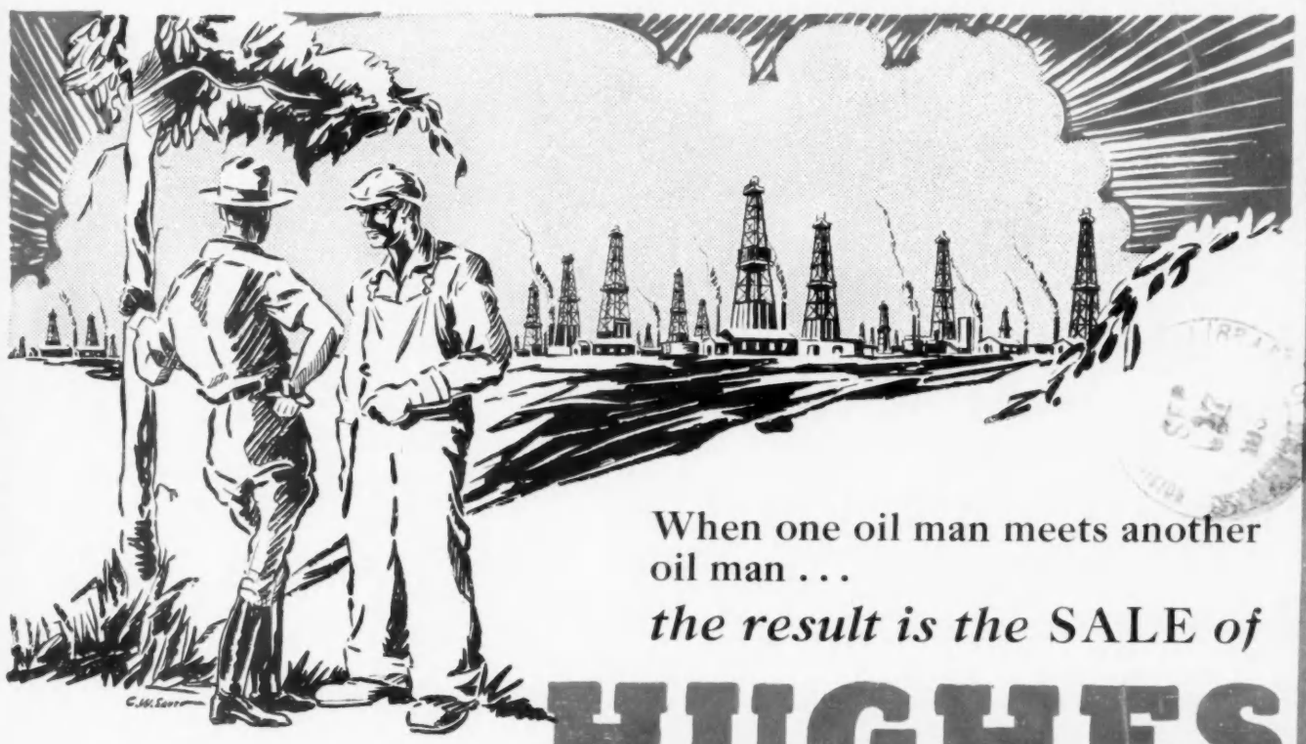

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EDITORIAL INDEX, PAGE 11

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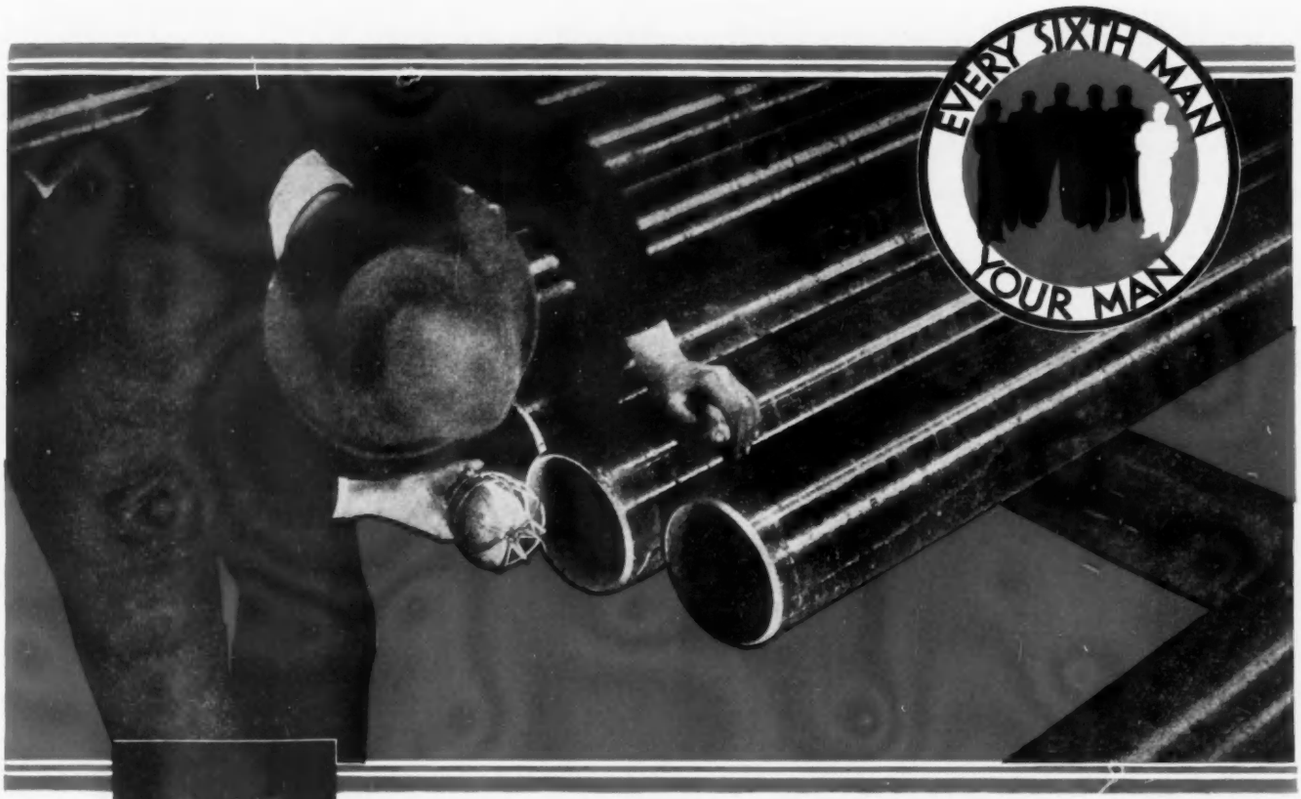

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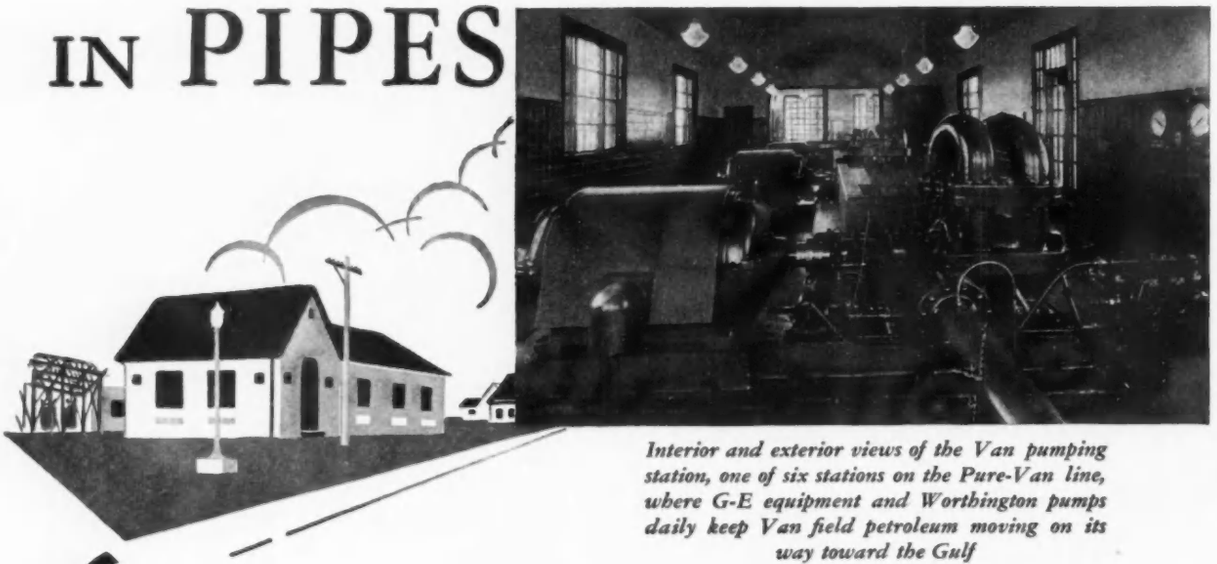

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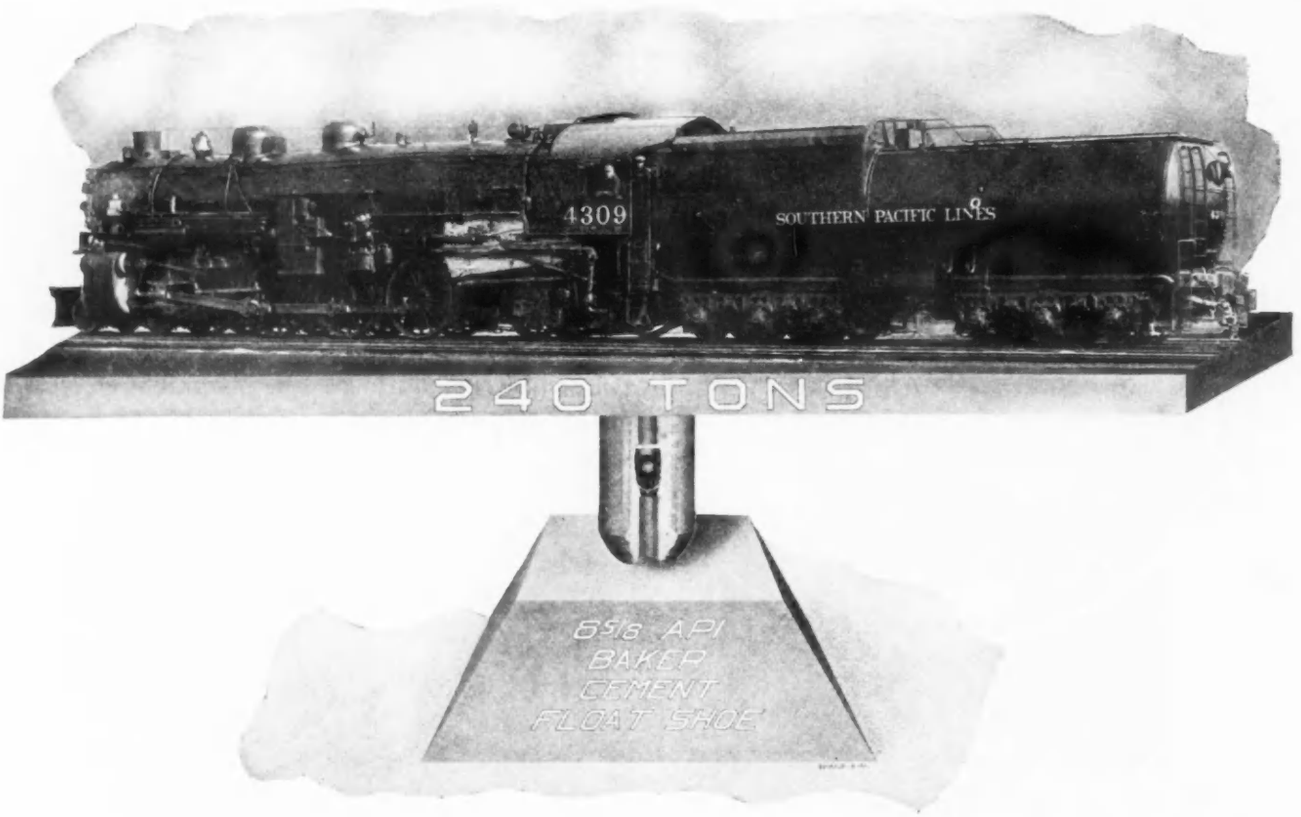

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THE OIL WEEKLY

September 11, 1931
Vol. 62, No. 13

S. W. ROBINSON
Editor

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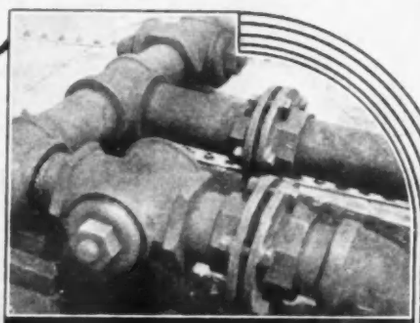

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THE OIL WEEKLY

VOLUME 62, NO. 13 SEPTEMBER 11, 1931

Will Hold East Texas Output Below 400,000 Barrels

Texas Commission says order fixing well output at 225 barrels daily does not mean license for unlimited drilling

By JACK LOGAN
Staff Representative

CASTING doubt over predictions that the existing conservation order for the East Texas field will result in increased drilling and mounting production, the chairman and a member of the railroad commission have indicated in separate interviews that it is the intention of that body to hold East Texas production below 400,000 barrels daily in spite of completion of new wells.

They explained that the present allowable of 225 barrels daily per well is not fixed for the two months' duration of the order, and that it may be and probably will be adjusted to a lower figure as the number of wells in the field increases.

Considerable fear had been expressed that upon opening of the field on the per-well basis of production allowances, drilling campaigns would move forward rapidly, precipitating a repetition of the chaotic conditions which preceded the recent martial law shut-down.

C. V. Terrell, chairman of the railroad commission of Texas, was quoted on September 4 by Thurman Hill of the conservation commission of Kansas to the effect that it is the intention of the Texas commission to hold the East Texas allowable within a total of 400,000 barrels daily, and Mr. Terrell confirmed that report on September 8, saying that such restriction of production will be sought in an effort to maintain reservoir pressure in the field and to prevent the unequal intrusion and coning of water in the area.

Interviewed September 5 in regard to the report that a maximum field allowance would be set, Lon A. Smith, member of the railroad commission, stated that the commission is convinced that a greater allowable than the above mentioned figure will cause the water table on the west edge of the field to rise unequally and result in damage to the field.

Duration of Martial Rule Indefinite.

Although there has been no official announcement from Governor R. S. Sterling as to how long the modified martial law regime will be maintained in the East Texas field, available information indicates that the skeleton force of 32 officers and 120 men left in the area Tuesday following a partial evacuation would be kept there indefinitely to serve as inspectors and messengers.

The field was restored to production on the basis of 225 barrels daily allowable per well on Saturday, September 5, following a 19-day martial shut-down, which had been invoked to allow time for the state railroad commission to issue a regulatory measure under the new conservation law recently enacted in a special session of the legislature. On September 8 the withdrawal of 557 men and officers was scheduled to be completed, and there had previously been a reduction of similar size in the original army of occupation.

Although Brigadier General Jacob F. Wolters, in command of the militia, reported September 6 that 13 wells in the

Plan Further Hearings On Waste in Other Texas Areas

Austin, Texas.—It was learned, September 8, that further hearings will be held in Austin in the near future to consider prevention of waste in each individual oil field now existing in Texas. Lists of operators in the various fields were being prepared, and notices of hearing may be expected shortly. The first hearing will probably cover the West Texas fields, and notice on this and some of the others should be issued the latter part of this week. It is improbable that any hearings will be set for an earlier date than September 23 when the pipe line hearing will be held.

TEXAS' FAMOUS RAILROAD COMMISSION

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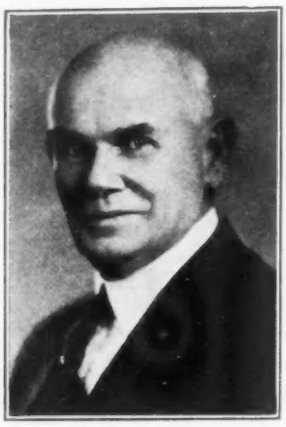


LON A. SMITH

East Texas field had produced in excess of the 225-barrel allowance each on September 5, the first day that the new order went into effect, he was of opinion that at least some of the excesses were unintentional. One well which had produced over 1200 barrels was ordered shut in until the overproduction was made up, and the other 12 were ordered pinched back enough to cancel the excesses. Preliminary and incomplete data for the first day's production compiled two days afterward showed that 1648 wells out of at least 1842 producers in the field yielded 362,825 barrels, indicating that the total for all the wells would be considerably above 400,000 barrels.

Nine Reporting Boxes Established

To expedite daily reports from the operators on production from their wells the military commander directed setting up of reporting boxes in nine towns in or adjacent to the big field. Locations of the boxes are at Kilgore, Longview, Willow Springs, Gladewater, Overton, Wrightstown, Turnertown, Henderson and Arp. The operators have been ordered to report each day's production by noon of the following day.

Any material excess will be reported to the railroad commission and the attorney general in Austin, together with information for court action which officials may wish to take. Under the law such offense can result in a penalty as high as $1000 fine for each day of violation.

Over a score of supervisors, gaugers and clerks of the railroad commission were sent into the field and they were directed to help and accept orders from the commanding general in making resumption of production of the field effective.

The reopening of the field was carried out under a military order issued by General Wolters, in which was incorporated the conservation of the railroad commission as an integral part. Aside from requiring daily reports on production from the operators, the general's order directed all purchasers, users and transporters of crude to make a similar report as to the amount of oil stored, transported, purchased, received or loaded. Through these reports and with the aid of cavalrymen and agents of the railroad commission the general expected to be in position to keep a close check to prevent or eliminate violation or evasion of the production allowances.

Conservation Order Criticized by Governor

Issuance of the railroad commission's conservation order on a per-well basis September 2 came as a general surprise; for on learning of the proposed contents of the order prior to its issuance Governor Sterling publicly condemned it as impractical and disastrous to small operators, and the commission was consequently expected to substitute the unit basis for production restriction.

The railroad commission presented a united front for the first time in months, as Commissioner Pat M. Neff signed this order following inclusion of a clause controlling gas-oil ratios. After conferring with the commission Governor Sterling decided to sanction enforcement of the order, although he had expressed disfavor of the per-well basis. The commission issued instructions for a force of 24 men to report to the field, and those agents began their work on the following Saturday morning when the order became effective.

The order permitting each well to produce 225 barrels per day was regarded by many as a victory for the Sinclair and the Gulf interests, which in contrast with other major and independent concerns appeared at the hearing in Austin the latter part of August to favor the principles which are embodied in the order over other plans which were proposed.

The conservation order was written and approved by the attorney general's department, which contended that the law would not permit proration on the unit basis.

Order Regarded as Experiment

Governor Sterling called all the commissioners to his office on Thursday, the day after the order was made public, and consulted with them briefly. They explained to him that they regarded the order as an experiment, and that they expect to make suitable changes and adjustments as the work of the supervisors and other employees in charge progresses. At the conclusion of the conference the governor agreed to permit enforcement of the order and to give it a fair trial. All attending the meeting were agreed that they were desirous of seeing the field opened at the earliest possible date, and with an order that would stand up in the courts.

(Continued on page 43)

East Texas Order Expected to Be Short Lived

Well basis brings storm of protest but commission expects to revise order to limit total output

THE railroad commission's new conservation order for the East Texas field has naturally come in for some adverse criticism, the objections being from different sources and having to do with various provisions of the order.

But on the whole there appears to be a general feeling that the order is essentially reasonable, and that the commission has handed down as practical a working program as was possible under the new conservation law.

That the commission chose its course with due consideration as to its legal rights is evidenced by the fact that the order was worded and approved by the attorney general's department. That the body acted independently and conscientiously is shown by the fact that it issued its order in the face of opposition by Governor Sterling, who had made the decree possible by virtue of obtaining passage of the new conservation law upon which it is based.

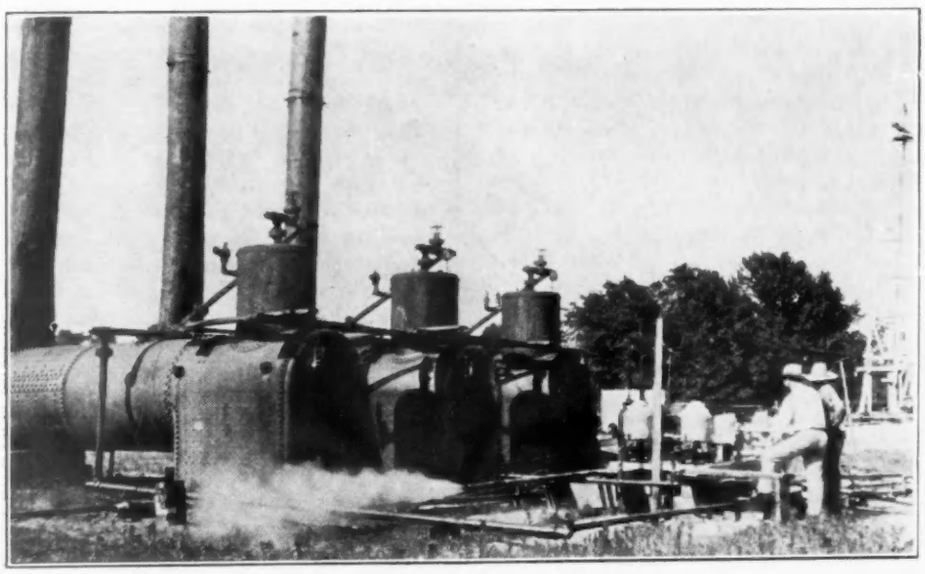
Regarding the East Texas conservation order as being in the nature of an experiment, the railroad commission made it subject to repeal, modification, or revision without further hearings. It is the first order issued by the commission upon that basis, and the "open docket" provision therefore represents a significant feature.

Being the last of 16 specific rules and regulations set forth in the order, the "open docket" provision was worded as follows:

"This order shall become effective at 7 a.m. September 5, 1931, and shall remain in full force and effect until 7 a.m. October 31, 1931, unless repealed, changed or modified by the Railroad Commission of Texas at an earlier date. It is distinctly understood that this cause is held open on the docket during said period and the railroad commission shall have the right and power to set aside, change, or modify said order in any respect, based upon evidence which was adduced at the hearing in Austin on August 25, 1931, to August 28, 1931, inclusive, without further notice."

The provision which leaves the commission's order open to changes will apparently be called into service in a short time—to effect lower production allowance per well because of the increasing number of wells in the field. The railroad commission, according to Chairman C. V. Terrell, will attempt to keep the field's allowable under 400,000 barrels daily in order to maintain reservoir pressure and to hold down water encroachment, and it proposes to cut the per-well allowance as new wells are completed in consequential numbers. In the original order it is specified that each well may produce 225 barrels daily.

Application of the provision allowing progressive reductions in per-well allowances will answer criticism of the conservation order on the score that it will allow an ever-increasing output for the field. The fear that it would allow excessive output of oil was one of several arguments given against the order by



Three Broderick boilers, rated at 180 *pounds and doing* 225 *on a Tidal Oil Company lease in the Kilgore area.*

W. S. Farish, president of Humble Oil & Refining Company, in a statement to the press.

Prorated by Wells

Aside from the above discussed provision under which the railroad commission may make changes in its regulations without necessity for a special hearing, probably the most interesting of the 16 rules set forth in the order is that in which it is stated that each well shall be limited to 225 barrels daily oil production, and that no well shall be permitted to produce with a gas-oil ratio in excess of 700 cubic feet of gas per barrel of oil. It is pointed out that although the operation of any oil well with gas-oil ratio exceeding that fixed by the railroad commission shall be regarded as waste, according to the new state law, the commission had found that evidence in the Austin hearing dealing with oil-gas ratios in the East Texas field was very meager and unsatisfactory. It was deemed advisable, therefore, for the commission to make further investigation on the subject in order to arrive at fair and comprehensive conclusions as to the most efficient ratios. Evidence having been offered, however, before the commission indicating that efficient results had accompanied production of 200 to 300 barrels daily, it was ordered that wells be restricted to 225 barrels daily production until the commission has completed its investigation work, provision also being made that no well be allowed gas-oil ratio exceeding 700-1.

This sixth section of the order while providing for collection of gas-oil ratio data by agents of the commission also calls for cooperation of the well owners in supplying the data. In that connection it is ordered that the owner or operator of each well aside from furnishing information and data, "shall equip his well or wells with necessary equipment for metering gas and taking pressures as, if, and when required by the railroad commission." Some of the operators are perturbed over this gas-oil ratio provision, anticipating that it may interfere with customary set-ups of flow lines and lease tanks, and not knowing whether or not it will require purchasing of special ratio determining equipment. A major company pointed out that it has found portable outfits for determining gas-oil ratios satisfactory, and also periodical tests, whereas it appeared possible that the railroad commission might not sanction such equipment and method. Separate gas meters on all wells together with other equipment used in gas-oil ratio work would constitute a large item of expense for operators with large numbers of wells, it was pointed out.

Another significant regulation in the East Texas order is that concerning spacing of wells. It modifies the commission's oil and gas conservation Rule 37 as affecting East Texas, providing that "No well for oil or gas shall hereafter be drilled nearer than 660 feet to any other completed or drilling well on the same or adjoining tracts of land, and no well shall be drilled nearer than 330 feet to any property line."

Tubing Use Provided

The use of tubing, which had been provided for by the commission in earlier East Texas proration orders, is ordered under the new program, and flowing wells are required to be equipped with adequate choke devices. It is required that all wells, including those already completed and those hereafter completed, shall be equipped with and produced through tubing not exceeding 2½ inches in diameter. An interesting provision in connection with the tubing is that the bottom of the tubing shall not be placed higher than the top of the producing oil sand. This requirement is generally approved by the East Texas operators, who find that it results in favorable gas-oil ratio and that it probably helps to eliminate clogging of wells through accumulation of paraffin, the oil being drawn off from near the bottom of the well, and thus coming out at a relatively high temperature.

Specific regulations are made in the new order as to combatting the salt water which is encroaching upon the field from the west. Owners of wells producing salt water were ordered to plug them back within five days after effective date of the order by filling in with cement so that the bottom of each well would be at least 10 feet above water table if the thickness of the sand would permit, and the same procedure will be enforced in the future in wells showing salt water. The plugging work is subject to supervision and approval of the deputy oil and gas supervisor in charge.

As further precaution against water intrusion no well is to be drilled into the producing oil sand more than two-thirds of the distance from the top of the sand to the known water

(*Continued on page* 43)

Teagle Sees Growth of The Cooperative Spirit

Walter C. Teagle, president of Standard Oil Company of New Jersey, said when interviewed recently by a representative of THE OIL WEEKLY *that "There is no hope for the oil industry until people realize that oil cannot consistently be produced in excess of market demand, and until producers can get together and co-operate to limit their output to the requirements of consumers.*

WALTER C. TEAGLE

"If operators of Oklahoma, California, and Texas could agree on some definite program of production, and if individual producers would not attempt to upset such a program, a situation would develop which in time would work itself out."

The interviewer received the impression that Mr. Teagle is somewhat optimistic regarding the growth of the co-operative spirit within the oil industry, this impression being based on his statements that "Certain constructive progress has already been made in the older fields of the United States, notably in California"; and "Those who refused to co-operate in East Texas were largely new-comers to the industry." He said also that there are a number of seasoned and experienced operators and men of sound ideas to be found in the East Texas fields, naming several well-known persons who have been active in the oil industry over long periods of years, whom he considers capable of leadership in the right direction."

He added, jokingly, however, that the industry appears to be more in need of "followers" than of "leaders." "There are too many Messiahs attempting to lead the industry, each in a different direction. What is needed is for some of these aspirants to abandon the ambition to leadership and fall in step with the rank and file of the industry."

The Texas Proration Order

By R. L. DUDLEY

THE proration order issued by the Texas Railroad Commission last Wednesday may be described as meeting with general disfavor among operators. Those who favored a small allowable think that the new order will not accomplish anything but a stimulation of drilling. Those who wanted to be "let alone" cannot well be favorable to it, although the attitude of at least one of the group which opposed the order may be said to be that of obedience to the commission's order. Those who wanted a unit basis are intensely dissatisfied, and so far as we recall, nobody wanted a well basis so there were no well basis proponents to be satisfied.

We listened to the testimony introduced at Austin. The testimony of the prorationists and that of the anti-prorationists were very conflicting. We do not pretend to judge as to which testimony had the most basis back of it because it all dealt largely in theory.

But as we listened to it we felt that the commission would have to accept the testimony of either one side or the other—certainly we could not conceive of it accepting part of one and a part of the other because of the conflicting nature of such testimonies.

Either water encroachment will prove dangerous or it won't. One side said it would. The other said positively that it would not interfere with ultimate recovery. The prorationists offered evidence to the effect that a withdrawal of 250,000 barrels of oil per day would permit an orderly withdrawal. The other side contended that even if there was danger of water ruining the sand—which they said there was not—nobody could estimate the safe amount of withdrawal. They did not suggest any figure. It appeared to us that the commission could either allow the wells to flow open or cut to 250,000 barrels. They did neither, but issued an order which will increase the production steadily unless they meet and change their minds.

The new order issued will stimulate drilling. Unless the order is changed there will probably be from 1000 to 1300 additional wells completed between now and January 1 in East Texas. It is conceivable that production there will run as high as 675,000 barrels per day by January 1, even if the order sticks in court, unless the commission calls a halt.

That part of the order dealing with methods of finishing wells probably will be a help. We believe that wells in any area where there is appreciable pressure, or where the pressure is unknown, should be finished with blowout preventers—and have said so in these columns. The order, however, leaves much to the imagination as to what is a "blow-out-preventer." The order on tubing probably will help.

We have studied the law as carefully as we could as a layman. We have listened to attorneys at Austin, both in public and in private, and we doubt the legal background of the commission for much of the particular order they have just issued. In fact, we believe that there is but one thing in the entire so-called conservation law that amounts to much and it was ignored by the commission.

The law forbids gas waste. The commission allows it in its order—in fact specifically says that waste of 157,000 cubic feet per well per day will be permitted!

It is true that we have a conservation law that is neither fish nor fowl. It was not built to help the price of oil and if the legislators intended that it should conserve the natural resources of the state they messed up the job, because, except for forbidding gas waste, the new law is not a real conservation law. It expressly withholds even the Railroad Commission's moral support from unit operation.

Surface and Subsurface Character Of Edwards Limestone

Producing horizon remarkable similar on outcrop and in wells

By RICHARD A. JONES

THE geological term "Edwards limestone" is well known in the oil industry as the name of one of the major producing formations of Texas. In the Balcones Fault region of Central Texas, the Edwards limestone to date has been the reservoir rock of three great oil fields—the Luling and Salt Flat fields in Caldwell County, and the Darst Creek field in Guadalupe County. A smaller pool, the Larremore field of Caldwell County, has also been developed from this same limestone. Hundreds of wildcat wells have been drilled to the Edwards limestone throughout the Balcones Fault zone in the search for other fields.

The Edwards limestone is Lower Cretaceous or Comanche in geological age. It is one of the most widely distributed formations in Texas. It outcrops continuously from the northern border of the state to the Rio Grande. The great extent of the Edwards Plateau is capped by this limestone, the formation having derived its name from its wide occurence in this high country of deep canons and flat plains. In view of the great economic importance of the Edwards limestone, a review of its character on the surface and in the subsurface in wells is an interesting comparison.

Edwards Limestone on Outcrop

In many counties in Texas the Edwards limestone may be observed on the surface in numerous outcrops. In generalized description, it is a white, hard limestone (calcium carbonate) or dolomite (calcium carbonate plus magnesium carbonate), containing flint or chert nodules. In the following paragraphs, a more detailed description of its surface character will be given, first in Bexar County, in the Balcones Fault region, and second in Kimble County, on the Edwards Plateau.

In Bexar County, a few miles north of San Antonio, the Edwards limestone outcrops over a considerable area, immediately on the southern or downthrown side of the main Balcones Fault. The limestone is usually crystalline in texture, although sometimes dense and fine grained. It weathers dark gray, but fresh surfaces are white or light gray. The rock is commonly very hard. It is often honeycombed and cavernous, a condition which has also been found by the drill to exist in the Edwards limestone deep within the earth. In good, clean-cut exposures in cliffs and quarries, layers of very porous limestone, full of small-holes, may be seen interbedded with strata which are compact and impervious. The occurrence of these porous layers shows how oil may accumulate underground in similar porous parts of the formation. The presence of flint or chert is an especial characteristic. The flint is usually in the form of small oval or discoidal concretions, which are arranged in layers along the bedding planes. Sometimes, however, the chert is a thin, distinct stratum between beds of limestone. The flint enclosed in the Edwards limestone is one of the principal means of identifying the formation and distinguishing it from other limestones, such as the harder portions of the Glenrose formation, which outcrop nearby in Bexar County.

In Kimble County, the Edwards limestone is the caprock of the high cliffs which fringe the North and South Llano Rivers and their numerous tributary creeks. It also forms the rocky surface of the "divides" or highlands between the streams. The top of the divides is often a plain covered with dark gray fragments of limestone, forming a "hummocky" mass peculiar to the outcrop of limestones. The cliffs along the streams often display 100 feet of Edwards limestone. The rock ranges from massive to thin-bedded, weathering buff and gray, although the interior is often white. There are dark-brown, almost black, layers, on both interior and exterior, which have the appearance of solidified mud: in fact, they are exactly this, hardened layers of limey ooze. In general, the Edwards limestone of the Edwards Plateau does not seem quite so hard as the outcrop of the formation along the Balcones Fault. There are soft, rather shaley layers in places interbedded with the hard limestones. As is the case in Bexar County, fossils are not very common in the Edwards limestone of Kimble County. However, some strata in the Llano Rivers country are composed of masses of shells, chiefly small, elongated snail shells or "turritelas". Aggregations of larger fossils also form distinct beds in various places. Chert nodules or concretions characterize the formation on the Edwards Plateau as in Bexar County. The flint is usually black or dark brown. On the whole, there is great uniformity in the Edwards limestone of the Balcones Fault region and that of the Edwards Plateau.

Edwards Limestone Underground

Hundreds of cores and samples of well cuttings have been obtained from the three major Edwards lime fields—Luling, Salt Flat, and Darst Creek—and from the numerous wildcats drilled throughout the Balcones Fault region. The subsurface character of the Edwards limestone, therefore, is well known. The following detailed section[1] gives the nature of the Edwards oil-producing horizon in the Salt Flat field, Caldwell County, Texas.

"Dobe", immediately under the hard Georgetown limestone. "Rotten", dolomitic lime rock. When eaxmined closely, is seen to consist of soft, yellow, oil-saturated

[1]McCollum, L. F., Cunningham, C. J., and Burford, S. O., "Salt Flat Oil Field, Caldwell County, Texas," Bulletin American Association Petroleum Geologists, November, 1930, p. 1408.

powder, composed of almost microscopic particles of dolomite and chalk, 2-3 feet.

Soft, dolomitic, porous, oil-saturated limestone, 8-10 feet.

Layer of extremely hard flint or chert (in most wells), 8-8 inches.

Very soft, porous, oil saturated limestone; ordinarily overlies a zone of material thought to be concretionary flint. This section of the pay horizon is evidently the more porous or the more productive of the two, 15-20 feet.

Salt and sulphur water are often encountered in the Salt Flat field, when the hard chert horizon near the base of the pay zone is penetrated by the drill. In some wells located very high on the structure, the total thickness of the pay horizon is somewhat greater than the average given above. The chemical character of the Edwards limestone in the Salt Flat field is shown in the following analysis.[2]

Humble Oil & Refining Company's Johnson 2. Depth, 2666-2677.5 feet; insoluble material, 2.3 per cent; calcium carbonate, 83.3 per cent; magnesium carbonate, 11.1 per cent; organic material, moisture, etc., 3.3 per cent; and, remarks—ground-up lime ("Dobe" sample.)

Humble Oil & Refining Company's Davis 2. Depth, 2700-2702 feet; insoluble material, 3.2 per cent; calcium carbonate, 44.2 per cent; magnesium carbonate, 32.0 per cent; organic material, moisture, etc., 20.6 per cent; and, remarks—tan, dolomitic limestone (sample below the "Dobe.")

Pure limestone is composed of calcium carbonate. Dolomite or dolomitic limestone consists of a mixture of calcium carbonate and magnesium carbonate. The dolomitic character of the pay horizon may be clearly seen from the second of the above two analyses—the pay zone in Humble Oil and Refining Company's Davis 2 contains 44.2 per cent of calcium carbonate and 32.0 per cent of magnesium carbonate.

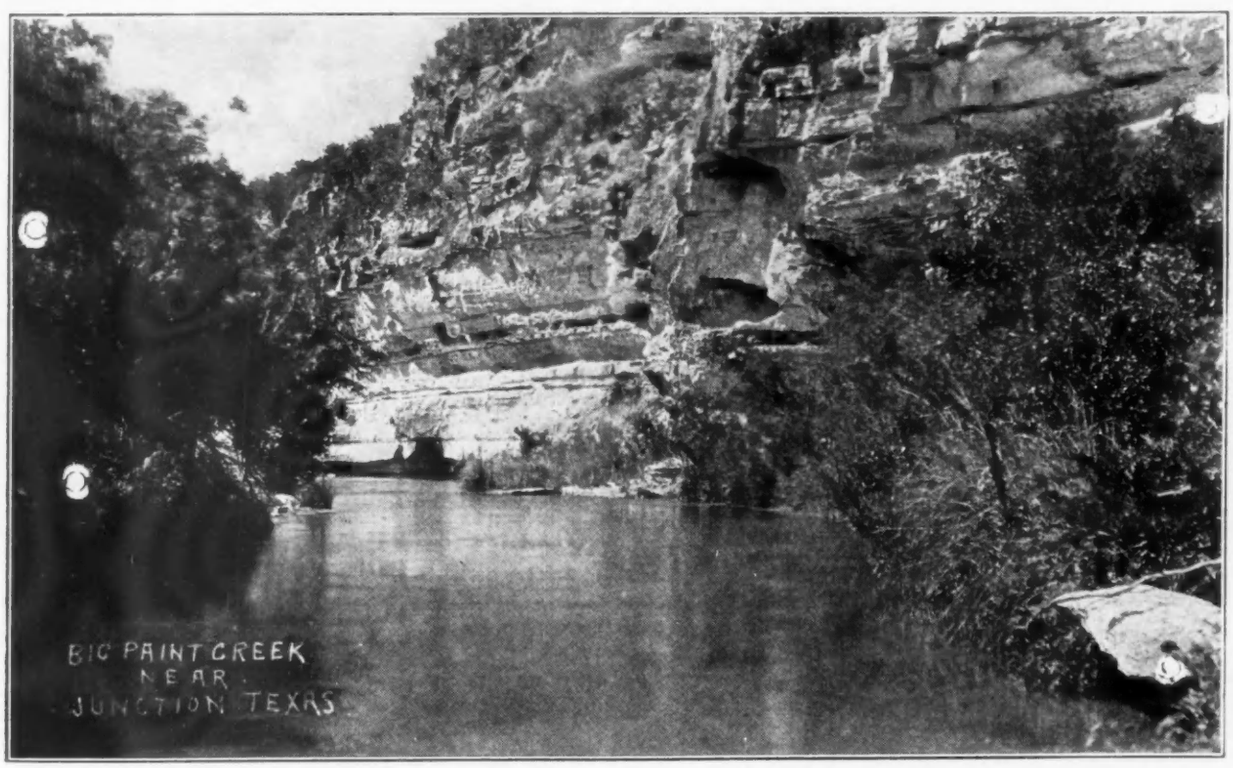
An interesting feature of the analyses is that the main pay zone beneath the "dobe" contains 20.6 per cent of organic material. Oil originates from decomposed organic matter, both of plant and animal nature; and the analysis shows that in the Salt Flat field organic material comprises one-fifth of the producing limestone, a significant fact.

Another noteworthy point revealed by the analyses is the extreme purity of the Edwards limestone, as far as the presence of insoluble material is concerned. The "dobe" contains only 2.3 per cent of insoluble matter. The Edwards limestone proper presents almost the same ratio, having but 3.2 per cent of insoluble material.

Summary

In summary, the Edwards limestone as found in the subsurface of the Balcones Fault Zone is a remarkably pure limerock, carrying strata and zones of dolomite and dolomitic limestone. It contains beds of flint or chert, and also concretions and nodules of chert. There is little difference between the character of the Edwards limestone as exhibited on the surface and the character which cores and well cuttings have shown it to possess in the subsurface. Naturally, the fresh rock brought up from wells is lighter in color than the limestone which has been exposed on the surface to the weathering action of the air, rain, and wind for thousands of years. However, the persistency with which the Edwards limestone maintains its typical character over long distances, both on the surface and in the sub-surface, is an exceptional geological phenonmenon. The Edwards limestone exposed in the cliffs and canons of the North and South Llano Rivers in Kimble County on the high Edwards Plateau, 2400 feet above tide water, is the same kind of rock as the Edwards limestone in the Salt Flat and Darst Creek fields, 150 miles to the southeast and 2700 feet underground.

[2]Same as preceding reference, p. 1409. Analyses by F. W. Rolhausen, Humble Oil and Refining Company Laboratory, Houston, Texas.



A bluff of Edwards limestone on Paint Creek, a tributary of the South Llano River, Kimble County, Texas. The limestone in this outcrop on the high Edwards Plateau, and the Edwards limestone in the fields of the Balcones Fault Zone, 150 miles to the southeast and 2700 feet underground, are entirely similar in character.

Gas Well Cleaned and Made Safe by Running Tubing

AMONG the various changes which have evolved during the past several years in the handling of oil and gas wells one of the most important is the growing use of tubing. The tubing is employed in oil wells to provide low gas-oil ratios, thereby conserving gas; and it is used in gas wells to eliminate or to reduce the production of water along with the gas. Along with recognition of the benefits of tubing there were devised methods and equipment making possible the running of tubing into live oil and gas wells, as against previous practice of "killing" wells for the tubing installations. The snubbing devices which were developed for running tubing into live wells consequently contributed further to the broadening of the use of the tubing.

Aside from the oil and gas wells which are tubed for the customary reasons just cited, there arise some special instances making the use of tubing advisable. One such example was the recent interesting tubing of a South Texas gas well, the Wade 1 of Joseph E. Walsh and Larcro Gas & Petroleum Company, first commercial producer ever completed in Jim Wells County, the location of the well being about two miles northeast of the town of Sandia.

The depth of this well is 2916 feet, the sand from which the gas is coming having been penetrated only a few feet. While drilling was in progress after striking of the gas sand the well started blowing in, and the crew hurriedly began "coming out" with the drill pipe, succeeding in removing all of it and in installing a Christmas tree on the well head and closing valves on the latter before the well could get out of control.

Subsequently the well stood closed in for a considerable period, during which the fittings developed leaks, being cut from within by sand. Finally, at the time it was decided to run tubing, every valve on the Christmas tree was leaking, while the well showed 1166 pounds pressure.

The condition of the Christmas tree made it imperative from a safety standpoint that remedial measures be undertaken, for there was danger that the sand might continue cutting the valves and result in the well running wild, endangering both life and property.

At the same time the well was largely an unknown quantity, being a wildcat producer, the first in the county; and consequently it was highly desirable to put it in such condition that its potentialities could be accurately as well as safely determined. It was known, in that connection, that the well needed to be cleaned out, since it had been shut in without having had an opportunity to finish cleaning itself. Installation of tubing offered a practical means for cleaning the well.

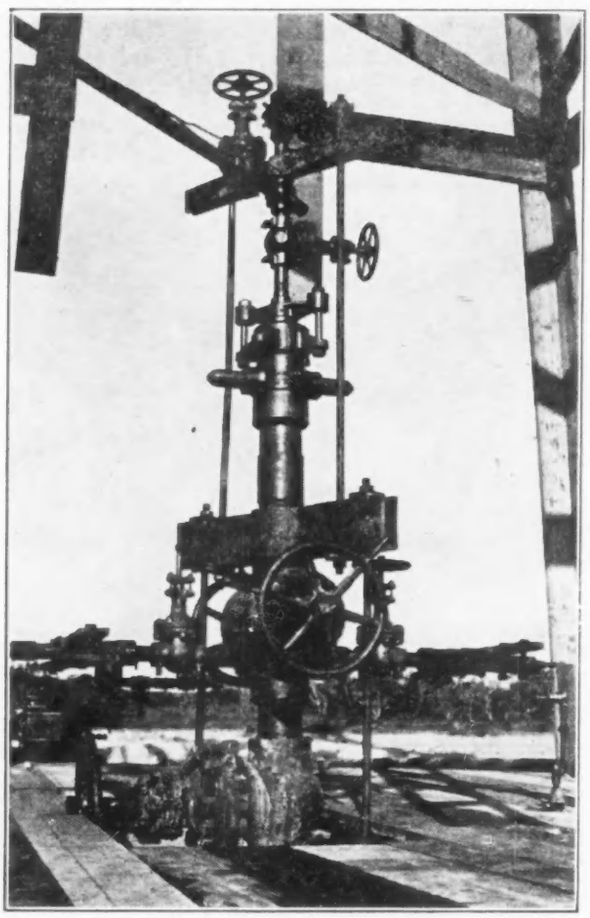
Consequently, to achieve the two purposes, providing of safety and determination of the capabilities of the well, it was decided not only to substitute new fittings for the leaky ones but also to install a string of 2½-inch tubing.

The results obtained through running of the tubing were successful. The well cleaned itself through the tubing, a considerable quantity of wash water being blown out; and when the well had finally cleaned itself it was shut in and it then registered pressure of 1350 pounds. Plans were then made to connect it with the gas pipe line of the United Gas System, which had agreed to buy the production upon delivery of dry gas from the well.

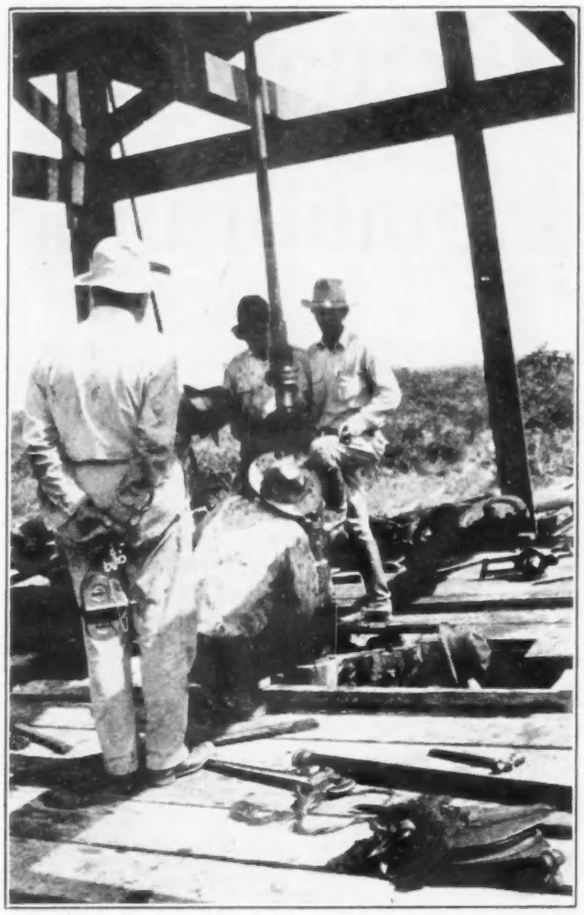
Description of Tubing Method

The tubing of the Jim Wells County gas well was carried out under supervision of W. C. Andrus of Cameron Iron Works, Houston, the snubbing equipment, tubing control head and tubing suspension head made by that concern being employed.

The master gate valve which was on the well was closed, and the original, leaking Christmas tree which was above that



Final hook-up Sandia gas well after being tubed, showing CIW suspension head mounted above the regular tubing control head, which in turn is screwed into master gate valve at derrick floor.



Landing last joint of tubing.

gate valve was unscrewed and removed, being handled by means of a cat line operated from a winch and tractor stationed adjacent to the derrick. Sam Rohe, Mirando City, Texas, mechanic had built the tractor and winch, and he operated them during the tubing job.

Previously there had been assembled three tubing heads, separated by nipples, to be used in snubbing the tubing into the well. After the old Christmas tree was removed, this assembly was stabbed into the master gate valve to prevent the well from getting out of control. Then the running of the tubing was commenced. The handling of the tubing heads and the tubing was accomplished by means of the above mentioned tractor and winch.

The first joint of tubing was fitted at the bottom with a "C. I. W." pyrex glass disc valve, to prevent the well from blowing up through the tubing. This joint was introduced into the well and additional pipe was run until there was a full string of about 2900 feet of 2½-inch tubing in the well.

In the process of running in the tubing use was made of a stationary and a traveling snubber, the traveling snubber gripping the tubing as it was pulled down by means of the cat line, and the stationary snubber preventing the tubing from being blown back out of the well while the traveling snubber was raised up for a new "bite" of tubing. In the meantime additional joints of tubing were added successively to the string as it was forced into the well.

The snubbing-in of the tubing was made possible by the use of the two upper tubing heads of the previously described assembly, these heads being opened and closed alternately to allow passage of the collars at the connections between the joints of tubing.

After the tubing had been run those two tubing heads were taken off, and they were replaced by a special suspension head, to which the top of the string of tubing was attached.

A "go-devil," a metal bar, was then dropped inside the tubing and within a brief span of time it had reached bottom, breaking the glass disc previously mentioned. The well then began cleaning itself. The well registered 800 pounds pressure on the tubing when the glass disc was broken, and as stated above, the pressure rose to 1350 pounds when the well had cleaned itself.

History of Well

The Jim Wells County gas well was completed by the original owner, Joseph E. Walsh of San Antonio, November 26, 1930, at which time its openflow capacity was variously estimated at 50,000,000 to 100,000,000 cubic feet daily. Larcro Gas & Petroleum Company of New Jersey, headed by Governor Morgan F. Larson, then acquired controlling interest in the well and the 6000-acre block upon which it was located.

The gas production of the wildcat producer is said to be associated with a line of faulting, and it is coming from the Oakville and Guyedan formations, according to the owners of the well. The latter have hopes that deeper horizons will also yield gas or oil, or both, for the Fayette and Yegua formations which lie beneath the present producing sand have been proven productive in adjacent fields of the Mirando-Laredo district and along the Gulf Coast.

Sam Rohe of Mirando City operating tractor and winch in tubing gas well near Sandia.

Supply and Demand Approaching Equilibrium

By H. J. STRUTH
Staff Economist

A MOST SATISFACTORY turn is reavealed by official petroleum statistics for July. Supply and demand figures for that month show that equilibrium was closely approached and offered justification for an improved price structure during August. In fact, the weighted index of demand indicated that July business was equivalent to that of July, 1930, while the index of supply was only six per cent above that of last year. Consideration of all factors for July indicates that the only reason for continued low oil prices was the uncertainty attending developments in East Texas. Except for drilling activity and attendant new oil production in East Texas the barometer for July showed that supply and demand factors were in theoretical balance. But for the unfavorable influence of unusually high productivity in East Texas, the oil situation would have recorded a degree of balance that would have been the nucleus for substantially higher oil prices.

Several important changes occurred in the barometer for July which had a pronouncedly favorable effect upon the statistical position of the oil industry. Imports of crude and refined products were materially reduced in comparison with last year. Crude imports dropped to a total of 3,588,000 barrels, a decline under July of last year of 39 per cent. Imports of gasoline were down 12 per cent compared with last year, while imports of all refined products showed a decline of 15 per cent in comparison with last year. Another favorable development in the foreign market situation was a gain in crude exports of 33 per cent in comparison with last year. As a result of the sharp upturn in crude exports during July, the cumulative status reflected a gain of three per cent. Exports of crude for the first seven months of this year amounted to 14,474,000 barrels, against 14,067,000 barrels last year. Refined oil also showed a material gain during July over June, 9.135,000 barrels in July against 7,753,000 barrels in June. Compared with last year, however, July exports of refined oils declined 17 per cent, while the cumulative total is 27 per cent below last year.

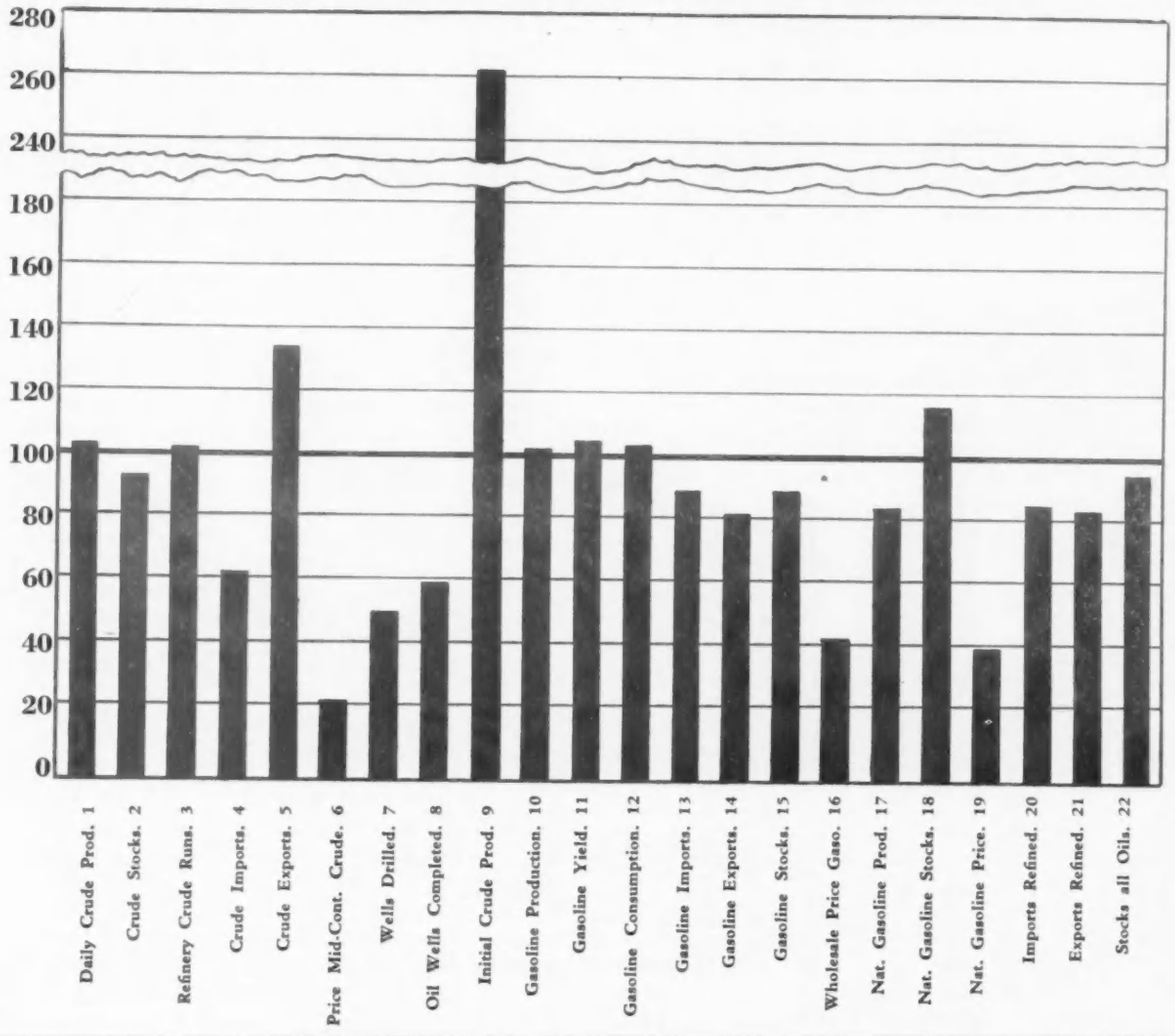
Stocks of all oils, according to the Bureau of Mines report, showed a net decline during July of 3,415,000 barrels, dropping to a total of 649,205,000 barrels. In comparison with last year all stocks have shown a decline of six per cent, while crude oil stocks have declined to the extent of eight per cent and gasoline stocks are down 12 per cent. Refinery runs of crude and gasoline production have exceeded the rate recorded during July of last year by one per cent. However, this increase was apparently justified since domestic demand for gasoline showed an increase over last year of three per cent. Nevertheless, exports of gasoline showed a decline under last year of 20 per cent, while the cumulative results indicate a net decline of 30 per cent under last year. On the whole, the demand for gasoline has been unusually good and the necessity for withdrawing substantial amounts from storage has effected a partial recovery in wholesale and retail market values.

The index of prices for July reflects the unfavorable influence of over-development in East Texas. As was pointed out before, East Texas remains the only adverse factor that has persistently prevented market reaction to an otherwise improved statistical position. Subsequent placing into effect an enforced shut-down in East Texas has, however, lent encouragement for the immediate future and limitation of production on a well basis of 225 barrels per well is expected by many to temper the effect of over-development in that area. It is seen, therefore, that the immediate future of the industry's price structure is almost wholly dependent upon the outcome of proration in East Texas. Thus, while the July index of market values was extremely unsatisfactory, the fact that equilibrium between supply and demand was so closely approached offers every reason to believe that the subsequent upturn in prices marks the beginning of a new trend that will be reflected in a better financial situation.

Here are some of the men in charge of pipe line construction work for N. A. Saigh Company of San Antonio, the picture having been taken recently while they were at work on the eight-inch line of The Texas Pipe Line Company between East Houston station and Texas City.

Reading from left to right, those in the picture are: J. B. McCord, mechanic; Jack K. Beaumont, purchasing agent and materials man; Charlie Prewitt, truck driver; and Lee A. Phillips, ditching machine operator.

Salient Oil Industry Factors for July, 1931, Expressed in Per Cent of July, 1930. Heavy Line (100) Represents July, 1930



Oil Industry Barometer—July, 1931

Index of Salient Factors—Current and Cumulative

	Factors—	This Month			7 Months Ending July 31		
		Last Year	This Year	Index (1)	Last Year	This Year	Index (1)
1	Daily Average Crude Production (Thous. Bbls.)	2,469	2,515	102	2,559	2,356	92
2	Total Crude Stocks (Thous. Bbls.)	530,135	489,935	92	530,135	489,935	92
3	Refinery Crude Runs (Thous. Bbls.)	78,644	79,758	101	556,301	518,093	93
4	Crude Imports (Thous. Bbls.)	5,877	3,588	61	37,007	29,097	79
5	Crude Exports (Thous. Bbls.)	1,973	2,621	133	14,067	14,474	103
6	Posted Price 36 Gravity Mid-Cont. Crude (Per Bbl.) (2)	$1.29	$.26	20	$1.29	$.61	47
7	Wells Drilled*	1,837	899	49	14,260	7,497	53
8	Oil Wells Completed*	930	545	59	8,012	3,904	49
9	Initial Crude Production (Thous. Bbls.)*	1,160	3,032	261	6,476	15,645	241
10	Gasoline Production (Thous. Bbls.)	38,061	38,440	101	261,378	250,366	96
11	Gasoline Yield—Average Per Cent of Crude (4)	42.58	44.11	104	41.59	43.57	105
12	Domestic Gasoline Consumption (Thous. Bbls.)	38,352	39,459	103	227,959	230,964	101
13	Gasoline Imports (Thous. Bbls.)	1,741	1,528	88	9,899	8,561	86
14	Gasoline Exports (Thous. Bbls.)	5,598	4,473	80	40,502	28,372	70
15	Gasoline Stocks at Refineries (Thous. Bbls.)	46,077	40,332	88	46,077	40,332	88
16	Refinery Price U. S. Motor Gaso.—Group 3 (Cents)	6⅝	2¾	41	7(3)	3¼(3)	46
17	Natural Gasoline Production (Thous. Bbls.)	4,231	3,521	83	30,683	26,499	86
18	Natural Gasoline Stocks (Thous. Bbls.)	741	855	115	741	855	115
19	Price Grade "A" Natural Gasoline, Group 3 (Cents)	5½	2⅛	39	6(3)	2½(3)	42
20	Imports of All Refined Oils (Thous. Bbls.)	4,040	3,435	85	25,627	22,719	89
21	Exports of All Refined Oils (Thous. Bbls.)	11,041	9,135	83	82,332	60,213	73
22	Total Stocks of All Oils (Thous. Bbls.)	692,887	649,205	94	692,887	649,205	94
	Weighted Index of Supply	.....	.....	106	.....	.....	105
	Weighted Index of Demand	.....	.....	100	.....	.....	91
	Weighted Index of Prices	.....	.....	33	.....	.....	45

*Exclusive of Rocky Mountains. (1)—Last Year—100.
(2)—Weighted Average. (3)—Monthly Average.
(4)—Straight run and cracked gasoline only.

California Organizations Divided On Proposed Standard Merger

LOS ANGELES.—The Oil Producers Sales Agency and Independent Petroleum Association of California have taken separate stands concerning the proposed merger of Standard Oil Company of New Jersey and Standard Oil Company of California. The latter has sent a letter to the United States Attorney General, urging him to prevent such a merger. The Oil Producers Sales Agency has issued a statement in which a more neutral stand is assumed.

Alfred L. Marsten, president of Independent Petroleum Association, recently wrote the attorney general at Washington as follows:

"A statement recently released to the press by W. C. Teagle, president of Standard Oil Company of New Jersey, and K. R. Kingsbury, president of Standard Oil Company of California, reveals an agreement and a plan for a merger of these two giant corporations. Permit me, on behalf of the Independent Petroleum Association of California, to direct your attention to this plan, and to state briefly reasons why such a plan, in our belief, is against the law and public policy, and why the Department of Justice should not consent to its consummation.

"By decree of the United States Circuit Court for the Eastern District of Missouri, November 20, 1909, modified and affirmed by the United States Supreme Court, May 15, 1911, Standard Oil Company of New Jersey and Standard Oil Company of California were specifically enjoined and prohibited from 'entering into or performing any like combination' to that dissolved by the court as illegal under the anti-trust laws of the United States. This decree of the court has not been modified or amended, and is directed specifically to Standard Oil Company of New Jersey, then and now a giant holding corporation, and to Standard Oil Company of California, named in the bill as one of the defendants, and the proposed merger of the two corporations would undoubtedly, in our opinion, be an act in violation of this decree.

"The enactment of the anti-trust law by the congress was an expression of public policy for the nation, and the dissolution of the Standard Oil monopoly in 1911 as contrary to the provision of the act was accepted as an important step in the emancipation of the people from monopolistic domination. Neither economic nor statutory laws have undergone appreciable change since the decree of the court directed against the Standard Oil monopoly, and we can find no reason why the Standard Oil Company now should be permitted to take the first step toward rehabilitation of a monopoly denounced by the statute.

"The bill of indictment on behalf of the United States against the Standard Oil Company complained of 'unfair methods of competition, such as local price cutting at the points where necessary to suppress competition.' It is our belief, shared generally by those engaged in the oil industry, that one of the basic reasons for the proposed merger of the Standard of New Jersey and the Standard of California is to effect a combination which may engage in price warfare for the destruction of competition on the Pacific Coast at the expense of gasoline consumers on the Atlantic Coast, or vice versa, without incurring financial loss to the merged corporation.

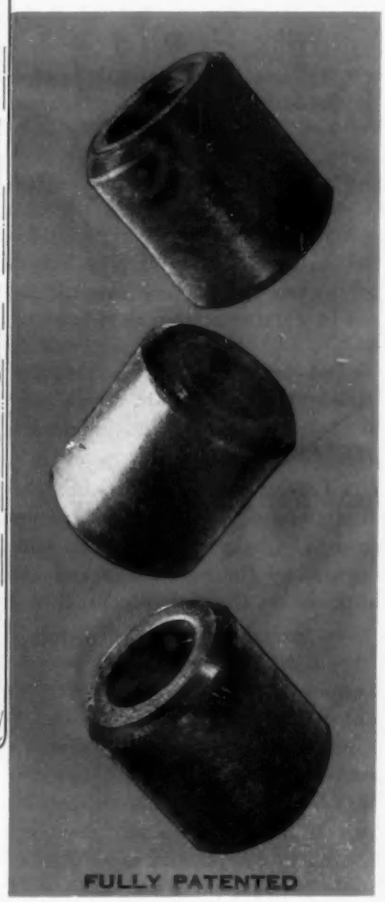
"It is also our belief that the Proposed merger is in pursuance of a plan to restore and maintain unreasonable profits in the oil industry because the Standard Oil Company, by strength of control of a closely-knit corporation operating from coast to coast and in foreign lands, could establish and maintain leadership in price-fixing, with its decrees to be violated by competing organizations at their peril.

"The Supreme Court of the United States, in construing the decree of the lower court, stated that 'The individuals and corporations were also enjoined from entering into or carrying into effect any like combination which would evade the decree.' We respectfully submit that the proposed merger of Standard Oil Company of New Jersey, purely a holding corporation with subsidiaries throughout the world, and Standard Oil Company of California, also exercising dominion over numerous important subsidiary organizations in the oil industry, would bring about a combination of greater strength and scope than the original combination dissolved by the federal courts at the instance of the government, and would clearly be an evasion of the decree of the court ordering such dissolution."

Ralph B. Lloyd, president, and Rush M. Blodget, vice president and general manager of Oil Producers Sales Agency of California, upon being shown the newspaper report concerning the protest sent to the United States Attorney General by Independent Petroleum Association of California against the proposed merger, made the following comment:

"The Oil Producers Sales Agency of California has no knowledge of the proposed merger of Standard Oil Company of California and Standard Oil Company of New Jersey, except as reported in the newspapers, but it recognizes that the oil industry has become an international business and for that reason the policy of this country should be to protect the business of its citizens so far as may be necessary to enable them to compete successfully in international markets and thereby create an outlet for the natural resources of this country. A proper merger of such large oil interests certainly would tend to stabilize the oil situation, and it could be expected that the increased markets resulting from it in foreign countries would be a direct benefit to all legitimate oil producers in this country. There is no reason to assume that Standard

(*Continued on page 44*)



Drill Pipe Dropped 4000 feet without damage

The Reason?—BETTIS PROTECTED!

Bettis Protectors have saved many strings of pipe from causing serious damage in dropping.

Harry E. Collins of Long Beach, relates an interesting story regarding unusual protection offered by Bettis Protectors.

"I have used Bettis Protectors continually since they have been introduced in the oil fields. I find drill pipe equipped with Bettis Protectors rotates more freely in the hole, they prevent casing from wearing out quickly, also eliminate cutting and changing Collars on drill pipe.

"They are a great benefit to the company and driller if flush joint pipe is being used. The open hole rubbers keep pipe freer than collars on union tool pipe. They insure straighter holes by keeping the drill stem in the center of the hole.

"I experienced dropping twenty stands of 4" drill pipe equipped with Bettis Protectors 4,000 feet. The drill pipe was fished out, but had not been bent. Bettis Protectors did not let the pipe fall swiftly. I owe the saving of the drill pipe and prevention of a bad fishing job to Bettis Protectors.

"If these Protectors wear off in the hole they cause no damage because they float out of the hole in the circulation."

Have you seen the NEW improved extra long Bettis Protectors? Ask about them.

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BETTIS PROTECTORS & DRILL STABILIZERS

"Best bet yet"

Centrifugal Pump Installation Gives Station Flexibility

THE use of centrifugal pumps of different pressures permitting several combinations of capacities to be handled through the line is one of the outstanding features of the equipment in the new Oklahoma City pump station of Sinclair-Texas Pipe Line Company. This is a recent improvement in the use of centrifugal pumps direct connected to electric motors for forcing crude oil through transcontinental pipe line systems.

By means of this new arrangement the company is enabled to obtain variable capacities of oil forced through the system. In illustration, the new Sinclair-Texas plant is equipped with two Byron Jackson three-stage multiplex centrifugal pumps, shaft connected to two 500 h.p. General Electric motors operating at a speed of 3550 r.p.m.

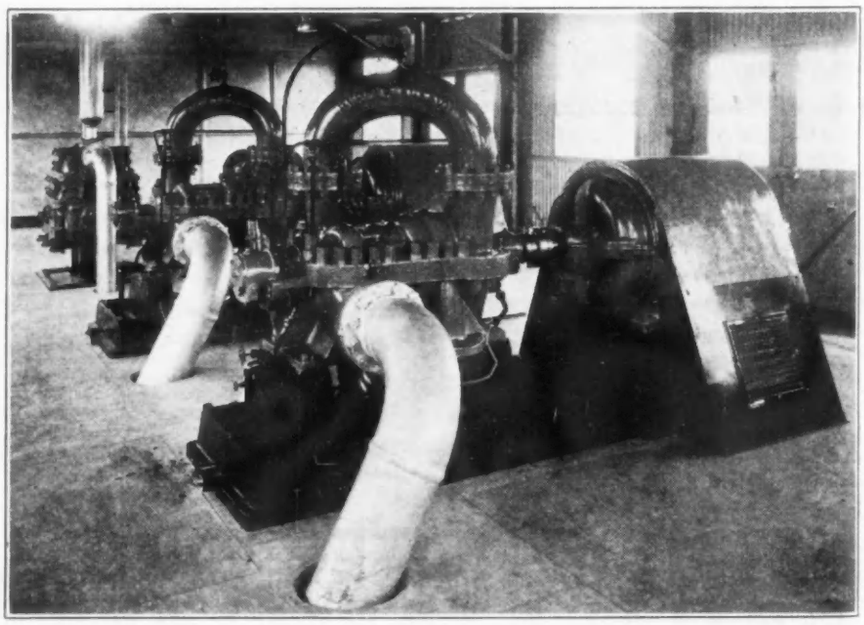
Operating at capacity, the oil is picked up in the Oklahoma City station at approximately zero pounds pressure and is stepped up to about 310 pounds pressure in the first pump. The second pump then picks up the oil from the discharge of the first pump and puts 340 pounds pressure additional on the flow discharging at 650 pounds pressure.

This variation in the pressure developed by the two pumps permits a substantial variation in the volume of oil transmitted. If both pumps are used in series, they will force 66,200 barrels of oil daily through the line to the Chandler pump station, 39 miles away. If the first pump, creating a pressure of 310 pounds, is used, it will force about 52,000 barrels daily through the line. If the second pump, creating a pressure of 340 pounds, is used, it will handle 54,400 barrels daily. In utilizing the first pump alone, oil is taken from the regular intake and the second pump is by-passed, the oil being discharged into the pipe line. If the second pump is used, the first pump is by-passed, oil being taken from the regular intake, and discharged, as in the series arrangement, into the pipe line system. In previous centrifugal-motor arrangements, in pumping stations of pipe lines, the usual plan has been to have the pumps identical, thus permitting none of the capacity variations possible in the Sinclair-Texas hook-up, without making sacrifices in the form of power consumed due to decreased mechanical efficiency.

Both pumps have eight-inch intakes and six-inch discharges. The new line handling the crude from the Oklahoma City field to the Tyro, Kansas, tank farm, near Coffeyville, is 12-inch in size. It is 153 miles in length, and has four pumping stations, with equipment like that at Oklahoma City. They are located at Oklahoma City, Chandler, Jennings and Tallant, a point near Pershing, all in Oklahoma.

Manufacturers of contrifugal equipment feel that the new equipment demonstrates an advance in this type of installation. Tests have shown that one of the big objections to the centrifugal-electric motor installations has been at least partially overcome, also. One of the criticisms of centrifugal pumps has been its relatively poor efficiency, in comparison to the efficiency of the plunger type, or reciprocating pumps. Test figures on pumps, such as those used in the Sinclair-Texas stations, show they are now developing 80 per cent or better, in efficiency, according to representatives of the Oklahoma Gas & Electric Company, the company furnishing the power to the stations. Motor efficiency, likewise, has been improved, with equipment in these new stations developing 94.5 per cent efficiency.

As is the case with other centrifugal-motor installations, the Sinclair-Texas stations have been able to dispense with much of the tankage and oil switching equipment, normally thought necessary in plants operated by plunger-type pumps.



Oklahoma City pump station of Sinclair-Texas Pipe Line Company

Here's the Answer to the HOLLOW BALL Question

They are tested for balance by floating in mercury

For years manufacturers and users have tried to produce or purchase hollow steel balls suited to their individual requirements. The results were discouraging. We know because we faced the same problem.

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TRANSIT hollow steel balls are seamless, and contain no second metal welded into the joints. In other words each ball is a hollow sphere of but one kind of metal. The finished ball is nicely balanced because it is formed accurately and contains no welding icicles.

They are ground to size and tested for balance by floating them in mercury. There are no plugs to loosen and leak or to unbalance the ball. The result is a perfect ball.

If you are interested in the use of balls as valves or for any other service we would like to tell you more about this great advance in hollow ball making.

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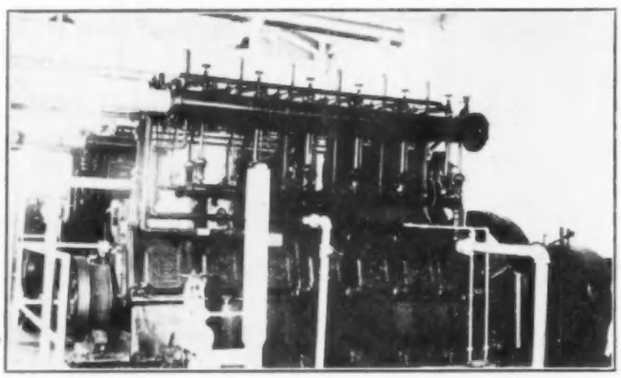
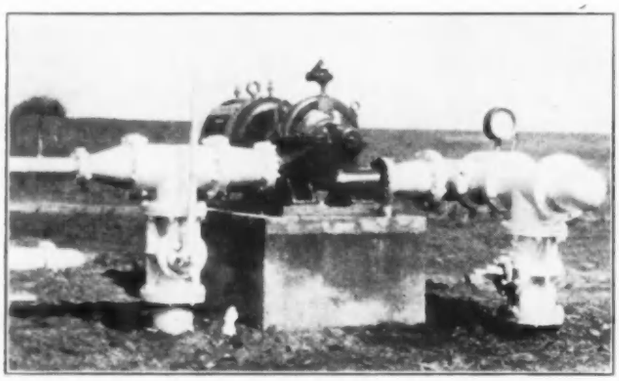
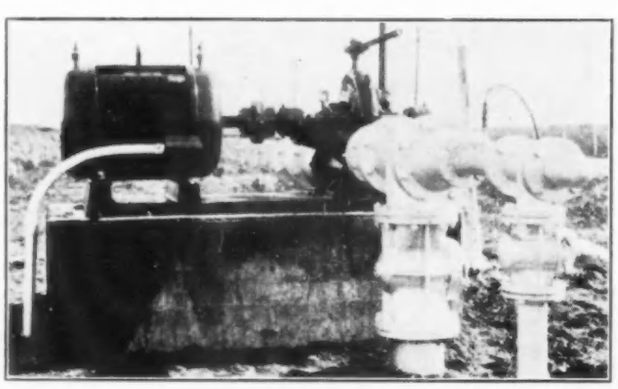
Line Handles Different Gasolines Without Mixing



Two Chicago Pneumatic 265 horsepower gas engines in the Wichita station of Phillips Pipe Line Company



Field pump for transferring gasoline from battery to pipe line or from one tank to another



Transfer pump in open

TRANSPORTATION of gasoline by pipe lines offers problems little different from moving crude through long transmission lines. But, when motor fuel of the several grades, as well as natural gasoline and liquefied butane are in transit in one line at the same time, naturally numerous questions have arisen regarding the miscibility of those products where one leaves off and another begins.

It has been proven that if the several fluids in transit are kept moving in a state of complete turbulence, there will be no contamination of consequence between one liquid of a high gravity with that of a lower gravity at the point of contact. Exhaustive experiments were carried out in short lines carrying several products of refineries and natural gasoline plants maintained at different states of turbulence by Phillips Pipe Line Company. This was done before an attempt was made to build and operate the 750 miles of gasoline pipe line from Borger, Texas, to St. Louis, Missouri, which is a transportation medium for the various grades of naturals and refinery gasolines manufactured by Phillips Petroleum Company.

It was shown from these experiments that the contamination occurring in the small pipe lines over a comparatively short distance was of little concern, and that the carrying out of the project involving hundreds of miles of large diameter pipe line, with several stations removing a portion of each product, carrying and boosting thousands of barrels of naphthas, motor fuels, naturals and liquid butane would present no difficulty that could not be overcome.

The line itself does not present anything radically different from those built by the other companies. However, in designing the seven pump stations, a radical departure from the usual was made in providing power with which to operate the pipe line pumps. In most pump stations either Diesels, steam operated pumps or electric motors are used for power. In the stations serving this line, Phillips Pipe Line Company has installed gas engines utilizing vaporized liquid butane for fuel. This was the result of the decision based on those things found in operating the experimental pipe line, that various liquids, including butane, could be transported at one time through the same line.

The station layout and design in regard to manifolds does not differ greatly from those in which one grade of liquid is handled. Centrifugal pumps have been installed. Two Byron Jackson four-inch, four-stage multiplex pipe line pumps are connected in series, which may deliver at the maximum point of operation, 30,000 barrels of gasoline per day against a total head of 750 pounds pressure to the square inch. These are driven by two Chicago Pneumatic vertical gas engines, type RHGA-40-S, delivering 265 horsepower at 360 revolutions per minute. The pump and engine are connected by a Westinghouse reduction gear, the pinion

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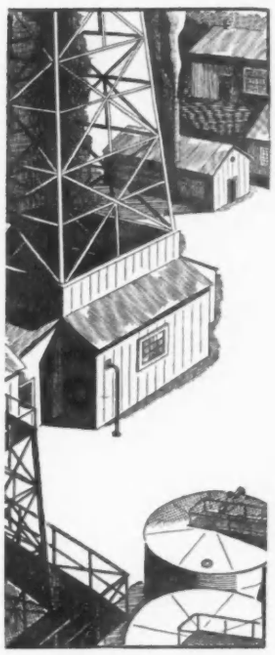

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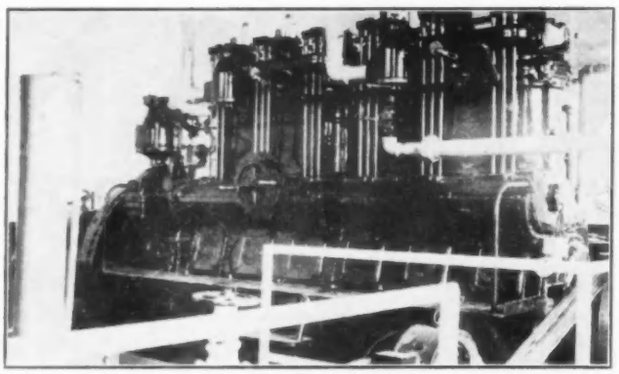
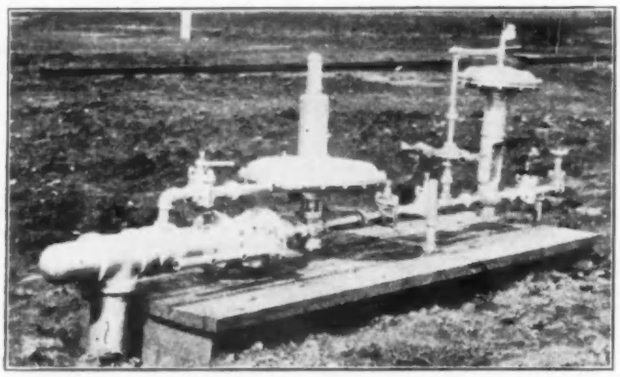
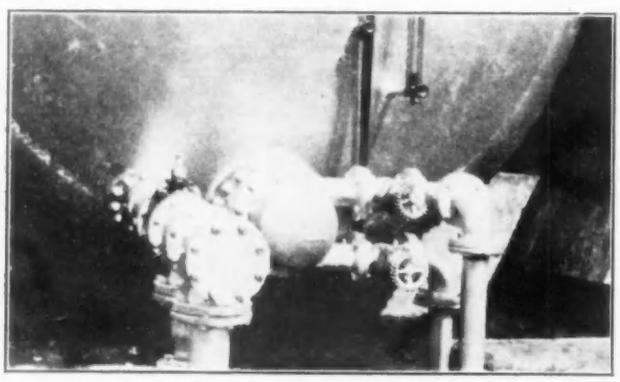


Carburetion or gas mixing side of 265 horsepower Chicago Pneumatic Gas Engine



Neilan valves used in reducing pressure on butane vapors from storage tanks to engines

Wagner Motor driving Byron Jackson pump to transfer butane



Element in base of 25,000 gallon butane tank to assist vaporization by passing water from engine jacket through it

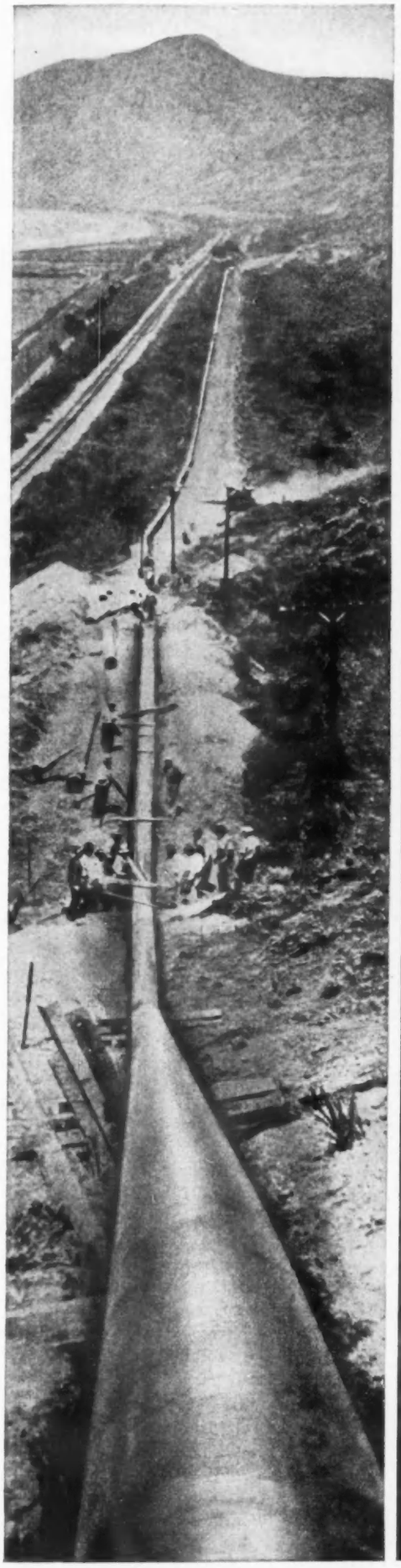
of which is stepped up to 3480 rpm. Between the reduction gear pinion and the pumps are placed two Fast's self aligning couplings. A brick separation wall was built dividing the engine room from the room in which the pumps are placed.

The Chicago Pneumatics are six-cylinder, four-cycle equipped with Robert Bosch high tension magnetos. Mercoid automatic controls are installed so that if the temperature of the cylinder jackets exceeds the point of safety, they automatically short circuit the magnetos, shutting down the engine before any damage from overheating may occur. Water is circulated over these engines and exhaust manifolds from a steel storage tank set some distance away from the station building. Each engine is provided with a three-inch single-stage Goulds centrifugal pump, driven by a belt and pulley which is placed on the outer end of the engine crankshaft, which picks up the water after it has been directed through the jackets and exhaust manifold. Lighting of the station is cared for by the operation of either of two Westinghouse direct current generators driven by the engines. The generator drive is taken from the front end of the crankshaft just back of the centrifugal pump drive, power being transmitted from the engine to the generator through a Goodyear Emerald Cord "V" belt drive.

At the Wichita, Kansas, station, built as a division point where motor fuels and naturals may be removed from the line to serve the territory in that district, storage tanks have been erected in which the motor fuels, motor fuel base blending stocks, naphthas and natural gasoline can be stored. Facilities have been provided so desired grades of motor fuel may be blended, the gravity and volatility being determined and controlled by the outlet latitude and seasonal changes of the year. Suitable high pressure storage tanks have been installed at each station in which to receive the liquefied butane, which can be taken from the line and stored while the pipe line is in operation. Each station removes only that amount of butane which is necessary to fill the storage, permitting the balance of the charge to move to the next station for its requirements.

As completed to Wichita, Kansas, the line is in operation, performing as it was expected. In operation, the various grades of gasolines are pumped into the receiving end of the line by what they term "slugging the line". A predetermined amount of motor fuel, motor fuel base blending stocks, twelve pound natural or liquefied butane is first introduced. Immediately after this amount is handled by the charging pumps, the tanks are switched so that another grade of product is introduced in the line. This is continued until each product has been represented by an amount sufficient to serve its purpose. On the first of May, the rate was maintained at 500 barrels per hour, representing approximately 63 car loads of the different products each 24 hours.

The gas engine fuel taken from the line is received in a battery of ten 25,000-gallon horizontal tanks, the first one of which is termed the working tank. When all the tanks are full, the vaporized butanes are removed from the top of the tanks through a suitable header under 50 pounds pressure to be reduced through two Neilan valves operating in series. The first one set in the one-inch line reduces the pressure in part, to deliver it to the next one in the series. The second valve reduces and delivers the butane vapors to a four-inch header leading to the engines. Especially designed gas and air mixing valves are installed on the intake manifold, one being used for each three cylinders. To overcome the latent heat of evaporation of the liquid butane, a Tulsa Type heating element was installed in the working tank, through which the cooling water from the jackets and exhaust manifolds of the engines is pumped



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Linde Process Service maintains high standards of pipe line construction at NEW LOW COST LEVELS

ACCURATE comparative cost figures were compiled on a recently laid Louisiana pipe line. A saving of approximately 50 per cent. in welding cost was indicated for oxy-acetylene welding by the new Lindeweld process, under Procedure Control.

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The method used is a revolutionary recent development which makes for maximum speed, economy and dependability. On hundreds of miles of pipe line Lindewelding has demonstrated its ability to save from 30 per cent. to 60 per cent. in welding time and to reduce materially the consumption of gases and welding rod.

Lines laid by this new method of oxy-acetylene welding have been subjected to every conceivable test of construction and operation. They have proved dependable under all conditions. The joints are strong, permanently tight and tough. Under Linde Process Service pipe line construction by this new method of welding may be undertaken with the same confidence in a satisfactory result as older methods, and with further assurance of increased economy and speed.

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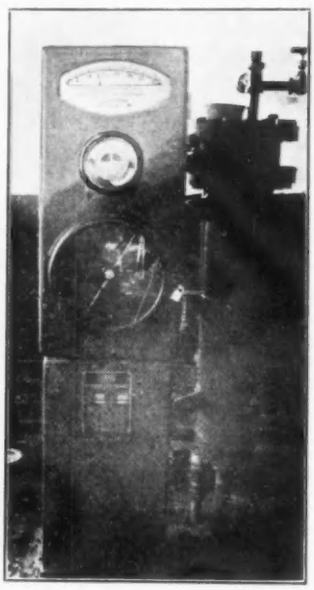
prior to being delivered to the louvre tower for cooling. As the vapors are taken from all the tanks while the pressure is maintained, the heating element is not used at all times. However, when the pressure falls below the requirements, it is put in operation while butane is added as needed to the working tank from the rest of the battery by a Byron Jackson 150-gallon-per-minute centrifugal pump operating against a 120 foot head at 3450 revolutions per minute, driven by a 7½ horsepower Wagner 220 volt AC vapor proof motor.

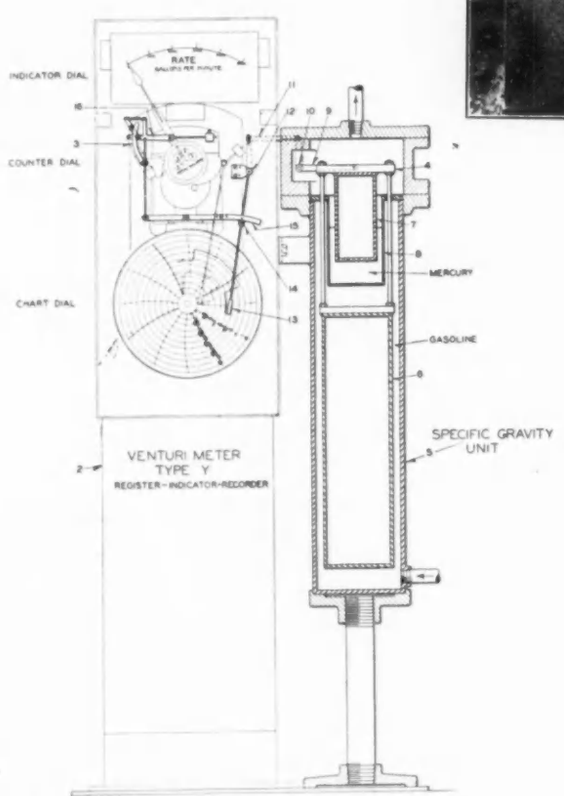
As the different materials are introduced into the line, the time is noted in relation to the number of barrels pumped each hour. This information is passed on to the several station operators, advising them at what specific time they may expect a change to occur in the material in transit. The station operators then may compute with reasonable accuracy the time when the liquid will change from 114 gravity butane, for instance, to 59 gravity motor fuel base blending stocks, or the blending stocks to the 12-pound natural.

While not being operated to its maximum capacity, the line has shown a negligible amount of contamination. In one specific instance where material was being taken from the line at the Wichita station, 59 gravity motor fuel base blending stocks were being received. This was followed by a "slug" of 12-pound natural. At the time indicating a break between the heavy refinery product and the light natural, the operators began testing by hydrometer readings the gravity of the material to determine just when to switch from the heavy blending storage to the natural tankage. From the time the gravity of 59 began to change as indicated by the hydrometer, climbing up through the gradations to 82 gravity, 26 minutes had elapsed, showing a contamination of approximately 9000 gallons, virtually half natural and half heavy blending stocks.

Another instance was when the butane followed the 59 gravity naphthas. The break came much more rapidly in this case than in the former. Checking as rapidly as the graduates could be filled, read and filled again, the time elapsed between the last of the heavy fuel and the light butane was only three minutes, indicating in this case only 1000 gallons of contamination.

To assist the operators in checking the material being transported, an especially built Venturi meter has been installed, with an indicator, counter and recorder showing in all three places the amount of barrels passing through the line. Built into this Builders Iron Foundry meter is a continuous gravity meter and recorder, showing continuously on a chart the gravity of the liquid in transit. With this meter in operation, the operators need only to anticipate the break between the various products to enable them to change receiving tanks, or to report to the next station that the break has passed through.





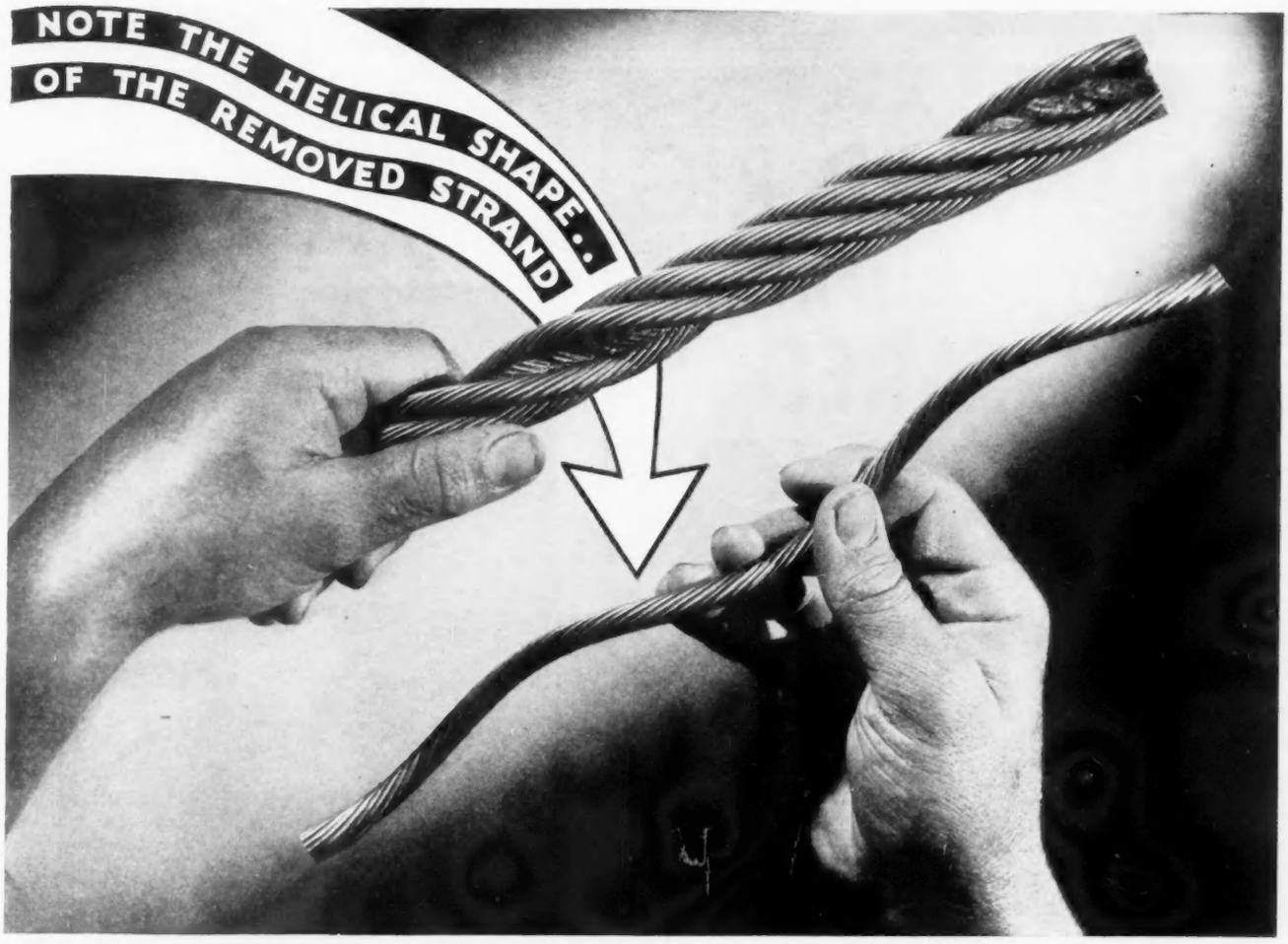
Specially built venturi meter which indicates, counts and records number of barrels passing through station. Apparatus at right of recorder weighs automatically the gravity of gasoline, showing on chart change as it occurs

This meter has been described by its manufacturers, Builders Iron Foundry, as follows:

"A Venturi Meter Tube (1) in the main pipe line creates the metering differential and a standard Type Y register-indicator-recorder (2) responds to this differential in the usual manner. The design of the Type Y, however, is modified so that a radius crank (3) causes the readings of all three Type Y dials to be corrected for changes in the specific gravity, or more exactly, for changes in the actual density of the gasoline being metered.

"The specific gravity unit (5) consists essentially of a hollow displacer float (6), carrying yoke (4), and a second displacer float (7), the latter dipping into a cup of mercury (8). The vertical motion of the displacer assembly is directly and sensitively proportional to the variation in specific gravity of the gasoline in which the displacer is immersed.

"A crank arm (9) guides the displacer and is centered on shaft (10), which has a small end (⅛" diameter) projecting through a single frictionless stuffing box. A link (11) transmits the motion of shaft (10) to shaft (12) in the register. To shaft (12) is attached a specific gravity recording pen arm and pen (13), the latter tracing the values of the specific gravity upon the rate of flow chart of the Type Y. Small roller (14) engages with a cam (15) and thus moves link (16) so that the length of radius or radius crank (3) is varied with the movement of displacer (6) and hence with the specific gravity. Radius crank (3) is actuated by the Venturi differential of the Type Y register and its movement would ordinarily control the readings of all three dials of the Type Y. It can readily be seen, however, that through the agency of the specific gravity unit, its movement becomes automatically corrected for variations in gasoline specific gravity and hence the readings of the three Type Y dials are similarly corrected."



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Preforming removes internal stress in wire rope. By preforming (preshaping) wires and strands so they are set to their exact helical form, wires and strands lie normally in place. In ordinary wire rope, which is not preformed, wires and strands are forced to wind about each other with clockspring tension — there is a constant tendency to straighten out.

Witness this internal stress in ordinary wire rope when you cut it. The ends must be firmly seized to prevent unraveling. Lay-Set is non-raveling. Note in the illustration above (which is made from an actual unretouched photograph) that the wires and strands stay in position, even though the end is unseized.

Elimination of internal stress in Lay-Set Preformed Wire Rope adds 30% to 300% *additional* service, which varies, depending upon the character and type of equipment. Rotary drilling is one of the most severe of all wire rope uses. Perfect spooling with Lay-Set Drilling Lines, quicker return of the idle block and absence of whipping at high speed are a few of the many reasons why Lay-Set Preformed Rotary Lines will give more ton-miles per dollar.

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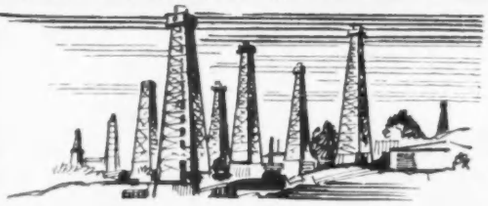
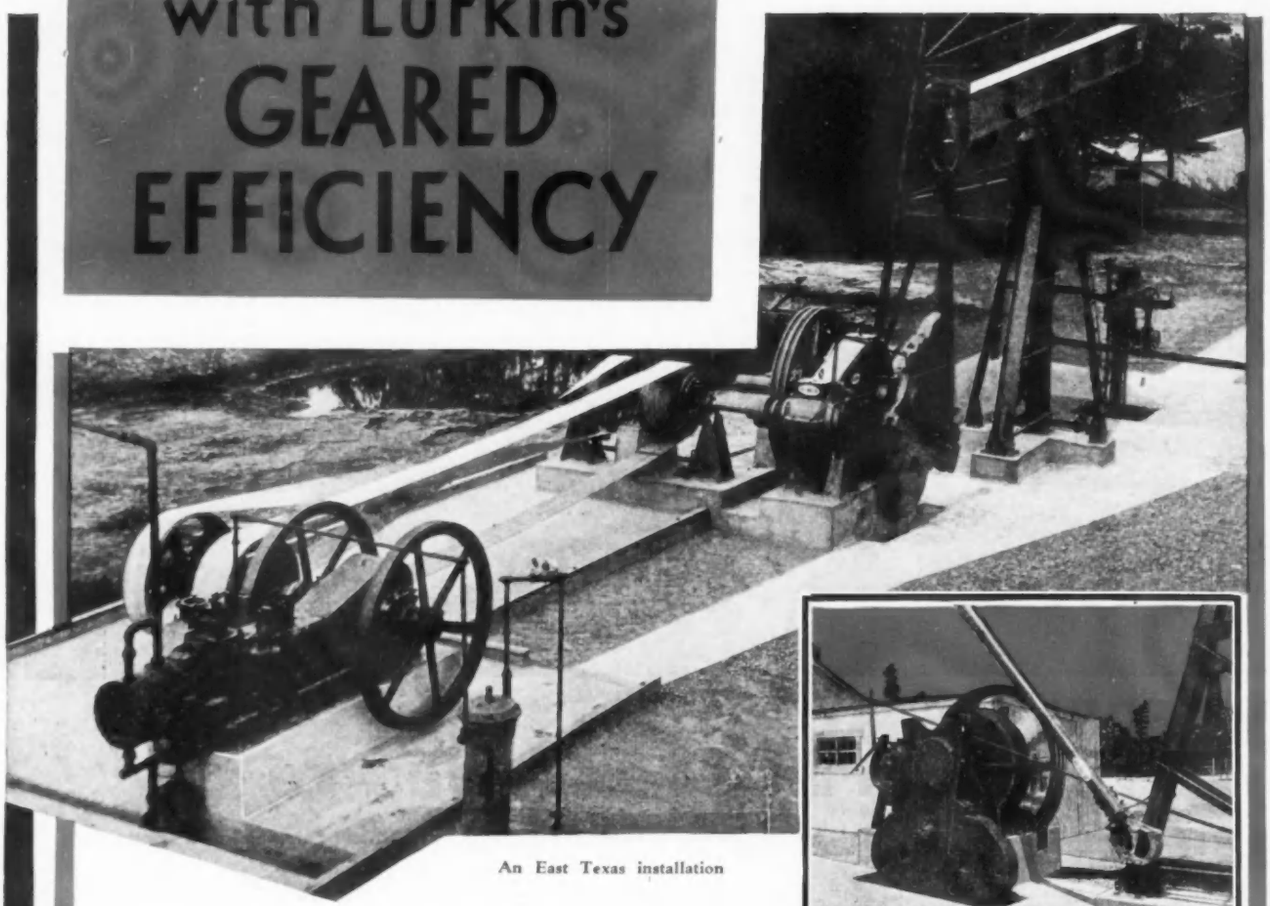
HAZARD LAY-SET PREFORMED WIRE LINES

A STANDARD RIG with Lufkin's GEARED EFFICIENCY

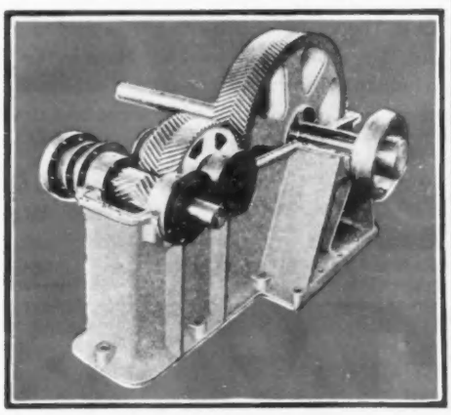




An East Texas installation

Crank "thrown-out" while servicing well

Gear cover removed showing type gearing



The Lufkin Herringbone Geared Rig Front . . . combining operating efficiency with the general adaptability of the "Standard Rig" is a distinct Lufkin achievement. This new unit assembly has been designed to operate with any type prime mover; any type drive and any combination of "hook-up."

A new type of counter balance crank (Trout-Croom Patent, which may be "thrown out" while servicing the well) is standard equipment on the new unit.

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LUFKIN UNITS

Markets • Production • Crude Prices

H. J. STRUTH, ***Staff Economist, Houston, Texas***

East Texas Output Placed At 400,000 Barrels

Saturday, September 5, marked the end of the complete shut-down in East Texas and the resumption of production on a limited scale under partial occupation by state troopers. While last week's production figures fail to reflect the effectiveness of the new proration order in East Texas, estimated production on the opening day indicates a daily average production of 362,000 barrels. It was noted, however, that this rate of production did not include all wells and application of the allowable of 225 barrels per well reveals a probable maximum output for East Texas of 400,000 barrels a day. Daily average production for Texas, exclusive of East Texas was estimated for last week to be 588,570 barrels, a slight gain over the total reported for the preceding week. It is seen, therefore, that current production of the state, including East Texas, will in all probability amount to approximately 988,000 barrels daily. Since production of Texas prior to the shut-down of East Texas amounted to 1,428,700 barrels, the indicated current production rate shows a decline of approximately 440,000 barrels a day.

The second week of non-production in East Texas resulted in holding the national crude production down to the low figure established during the week ending August 29. In fact, total daily average production for last week was 4250 barrels lower than in the preceding week, having dropped to a new low point of 1,746,300 barrels. Little change was recorded in production of the various major districts. Decreases were reported by Oklahoma, Kansas and California while increases occurred in Texas, Louisiana, Arkansas, Eastern states and Rocky Mountain states. Oklahoma's production was down to but 256,600 barrels a day, while California's output had declined further to a total of 503,200 barrels daily.

Just what the outcome of the new order in East Texas will be in the near future is somewhat problematical. Placing a limit of 225 barrels per well there will have a tendency, of course, to hold back a certain amount of oil but the fact remains that development has shown little or no tendency toward abatement and the eventual outcome will undoubtedly result in a further over-production in that area. While it is difficult to accurately ascertain what limit would best conserve reservoir pressures in East Texas, it seems to be the opinion of many that production there should not exceed 300,000 barrels a day if waste is to be prevented and economic stability is to be maintained. Under the new proration order, it is already apparent that production will immediately amount to at least 400,000 barrels a day, while subsequent development of proven acreage must result in a gradual increase in production. If the present order is maintained for any length of time, it is seen that production must continue to seek higher and higher levels.

Even a most casual survey of the economic situation cannot fail to reveal a flat well limit for East Texas as a continued menace to the welfare of the petroleum industry. Particularly is this true when consideration is given to the supply and demand outlook over the balance of this year. Obviously, the approach of fall and winter offers little incentive to increase crude oil production; in fact, the time is practically at hand when no uncertain means should be employed to prevent overproduction of crude oil. Under the circumstances, every experienced operator must realize that the industry faces a definite falling off in demand for crude and the only way to maintain a fair price for oil during the fall and winter months is to keep production in conformity with market requirements. If East Texas is to be allowed to produce upwards of 400,000 barrels of oil a day, it is logical to assume that it will be extremely difficult to prevent over-production and to maintain any semblance of normal market prices. The situation in East Texas will not be cured by limiting each well to 225 barrels a day; the real issue at stake is to prevent East Texas oil from glutting the oil market and undermining the industry's price structure. If East Texas continues to produce 400,000 barrels or more each day throughout the coming fall and winter, it is a safe bet that the prospect of higher crude prices will be sidetracked. Improvement in the industry's statistical position has warranted a better price structure but unnecessarily high production in East Texas can quickly disrupt the effect of an otherwise balanced supply and demand situation.

Oklahoma-Kansas Holding Out For Dollar Per Barrel For Oil

Reopening of the East Texas pool last week left a dent in the barrier that was set up a month ago in an effort to bring a dollar a barrel for Mid-Continent oil. There were no breaks, however, and the situation so far as Oklahoma is concerned is that there will be dollar oil before the prorated fields of that state are ever opened.

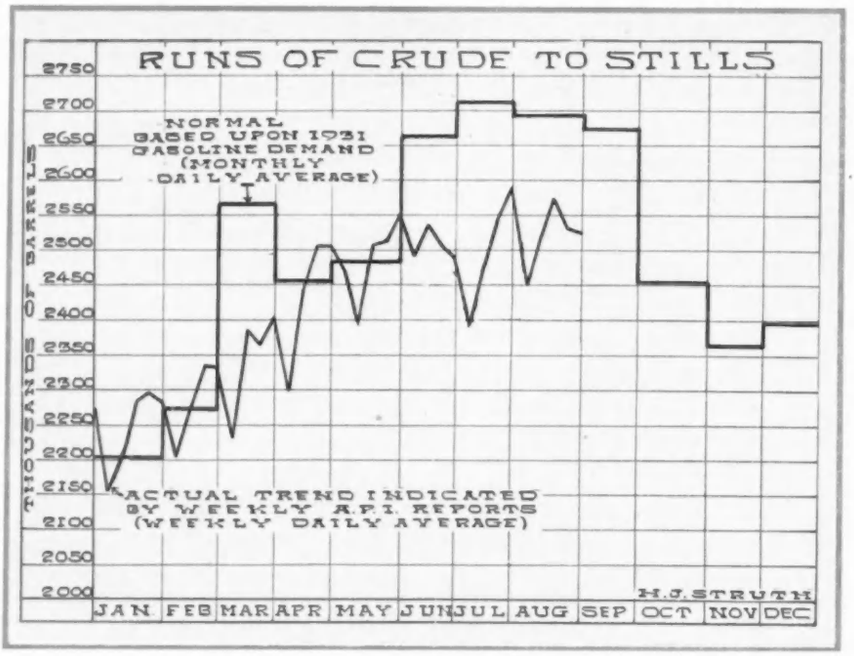
In Kansas the Public Service Commission abandoned its effort to force the price of oil to a dollar a barrel. Since comparatively little oil had sold at that figure and one buyer had withdrawn previous to the opening of East Texas, the break in Kansas seemed of trivial effect. Although the effort to gain a dollar a barrel for Ritz-Canton crude was abandoned, the proration order for the field was not changed.

Standish Oil Company, buying subsidiary of Phillips Petroleum Company, had been paying a dollar a barrel for Ritz-Canton crude. It withdrew as a purchaser there last week and officials explained that some oil from the field had sold at below the dollar price. In other fields, however, the Phillips subsidiary continues to pay the dollar price for oil in the higher gravity brackets.

Phillips Petroleum Company continues as the only concern paying as much as a dollar a barrel for oil in Oklahoma. Conditions in Oklahoma remain at a standstill. But the attitude of the Oklahoma governor is adamant. His latest threat is the voting of state bonds, whose proceeds will be used to build refineries and produce gasoline as a state-owned and manufactured commodity.

The threat of state refining plants came when the Oklahoma governor was assured that the East Texas field would

MARKET SECTION



be reopened on the 225-barrel per well basis. He classed that losing a fight after it had been won.

"That is no proration at all," he remarked, "that's a flood."

"But I haven't lost my fight," he added. "The oil is still safe in the ground. Nobody is stealing it.

"If they fool with me I'll initiate a bill based on a higher income tax and open up state refineries. That will catch the big oil men. We will issue bonds to build refineries and assess it on the higher incomes and proceed to refine oil.

"That bunch is playing the wrong game. We will use their own money."

Military shut-down of the prorated fields of Oklahoma was one month old September 4 and there were no indications of a change in their status. Conservation officials of the oil producing states will meet in Oklahoma City September 11 in an effort to prepare a program of oil production in relation to oil imports. Representatives of the con-

Crude Runs to Stills, Gasoline Stocks and Gas and Fuel Oil Stocks

Week Ending August 29, 1931

(Figures in barrels of 42 gallons)

District—	Potential Capacity (Daily) Total	Potential Capacity (Daily) Reporting	Per Cent	Crude Runs to Stills Total	Daily Average	Per Cent Operated	Gasoline Stocks (see note below)	Gas & Fuel Oil Stocks
East Coast	633,700	633,700	100.0	3,203,000	457,600	72.2	4,860,000	10,803,000
Appalachian	149,600	137,400	91.8	703,000	100,400	73.1	1,180,000	1,448,000
Ind., Ill., Ky.	436,300	431,500	98.9	2,348,000	335,400	77.7	4,715,000	4,429,000
Okla., Kans., Mo.	485,700	435,200	89.6	2,033,000	290,400	66.7	2,448,000	5,192,000
Texas	838,200	765,400	91.3	3,774,000	539,200	70.4	6,128,000	11,552,000
Louisiana-Arkansas	233,100	23,500	98.9	1,332,000	190,300	82.6	816,000	3,074,000
Rocky Mountain	159,400	142,300	89.3	373,000	53,300	37.5	1,289,000	817,000
California	912,500	880,100	96.5	3,405,000	486,400	55.3	*11,779,000	97,570,000
Total week Aug. 29	3,848,500	3,656,100	95.0	17,171,000	2,453,000	67.1	33,215,000	134,885,000
Total week Aug. 22	3,848,500	3,656,100	95.0	17,209,000	2,458,400	67.2	34,068,000	134,805,000
Total Aug. 30, 1930	3,686,400	3,525,400	95.6	17,074,000	2,439,100	69.2	38,815,000	139,662,000

The Texas and Louisiana Gulf Coastal figures shown below are included above in the totals of their respective districts.

Texas Gulf Coast	532,500	531,500	99.8	2,777,000	396,700	74.6	4,909,000	8,141,000
Louisiana Gulf Coast	147,500	147,500	100.0	893,000	127,600	86.5	685,000	2,033,000

NOTE: In all the refining districts indicated except California, figures in this column represent gasoline stocks at refineries. In *California, they represent the total inventory of finished gasoline and engine distillate held by reporting companies wherever located within Continental United States—(stocks at refineries, water terminals and all sales distributing stations, including products in transit thereto).

MARKET SECTION

HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH NECESSARY AND NORMAL QUOTA LIMIT

State—	Indicated Demand Third Quarter 1931	Economic Limit Third Quarter 1931	Daily Average Last Week	Daily Excess Last Week	Daily Average Since January 1	Daily Excess Since January 1†
Arkansas	63,000	60,000	37,900	—22,100	45,736	—10,264
California	525,000	487,500*	503,200	15,700	526,770	30,970
Kansas	127,000	120,000	98,700	—21,300	106,817	—6,183
Louisiana	85,000	75,000	53,450	—21,550	64,388	—9,612
Oklahoma	593,000	550,000*	256,600	—293,400	491,111	—15,589
Texas	860,000	797,000*	588,550	—208,450	877,379	165,679
Balance of U. S.	275,000	260,000	207,900	—52,100	206,438	—35,262
Totals	2,528,000	2,349,500	1,746,300	—603,200	2,318,639	119,739

*Allowable.
†Excess based on allowable to date.

cerns known as importing companies will attend the conference.

After that meeting Oklahoma producers expect changes for the state. The Oklahoma governor has intimated that the prorated fields will not be reopened until changes have been made in orders of the corporation commission. If the governor can not gain changes by orders of the commission he is expected to issue the orders through martial law. The designation of producing sands as units will be one of the conditions imposed upon the fields before they are reopened.

The dollar a barrel minimum will be one of the conditions and in this producers see little change for the reopening of the prorated fields. They believe the type of order under which the East Texas fields now operate will allow both major purchasers and independent refiners to get sufficient crude for their needs over a long period. Several Oklahoma refiners were shipping crude in tank cars. This will

Cracked Gasoline Production

Week Ending August 29, 1931

(Barrels of 42 gallons)

District	Potential Cracking Capacity (Daily) Total	Reporting	Per Cent	Production Daily Total	Average
East Coast	261,300	236,300	90.4	687,000	98,100
Appalachian	56,300	54,100	96.1	185,000	26,400
Ind., Ill., Ky.	330,400	315,400	95.5	599,000	85,600
Okla., Kans., Mo.	237,800	219,500	92.3	446,000	63,700
Texas	450,800	436,200	96.8	847,000	121,000
Louisiana-Arkansas	112,400	112,400	100.0	208,000	29,700
Rocky Mountain	99,100	97,600	98.5	120,000	17,200
California	190,800	190,800	100.0	336,000	48,000
Total week Aug. 29	1,738,900	1,662,300	95.6	3,428,000	489,700
Total week Aug. 22	1,738,900	1,662,300	95.6	3,350,000	478,600
Total Aug. 30, 1930	1,589,200	1,325,400	83.4	2,647,000	378,200

The Texas and Louisiana Gulf Coastal Figures Shown Below are included above in the totals of their respective districts.

Texas Gulf Coast	352,400	347,400	98.6	656,000	93,700
Louisiana Gulf C'st	77,000	77,000	100.0	143,000	20,400

Imports of Petroleum

(Barrels of 42 gallons)

	Week Ended August 29	Week Ended August 22
AT ATLANTIC COAST PORTS—		
Baltimore	148,000	69,000
Boston	238,000	.....
New York	503,000	678,000
Philadelphia	98,000	227,000
Others	.....	60,000
Total	987,000	1,034,000
Daily Average	141,000	147,714
AT GULF COAST PORTS—		
Galveston District	65,000	.....
New Orleans & Baton Rouge	78,000	.....
Port Arthur & Sabine District	.....	.....
Tampa	.....	.....
Total	143,000	.....
Daily Average	20,429	.....
AT ALL UNITED STATES PORTS—		
Total	1,130,000	1,034,000
Daily Average	161,429	147,714
Daily Average Four Weeks Ended	183,429	190,857
Distribution of Total Imports is as Follows:		
Crude	606,000	815,000
Gasoline	168,000	60,000
Fuel Oil	356,000	159,000
Total	1,130,000	1,034,000

California Oil Receipts

(Barrels of 42 gallons)

	Week Ended August 29	Week Ended August 22
AT ATLANTIC COAST PORTS—		
Baltimore	.....	.....
Boston	.....	.....
New York	377,000	132,000
Philadelphia	.....	115,000
Others	32,000	40,000
Total	409,000	287,000
Daily Average	58,429	41,000
AT GULF COAST PORTS—		
Total	.....	.....
Daily Average	.....	.....
AT ATLANTIC AND GULF COAST PORTS—		
Total	409,000	287,000
Daily Average	58,429	41,000
Daily Average Four Weeks Ended	36,036	42,107
Distribution of Total California Oil Receipts is as follows:		
AT ATLANTIC COAST PORTS—		
Gasoline	409,000	279,000
Lubricants	.....	8,000
Total	409,000	287,000

MARKET SECTION

United States Daily Average Production

1930	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
June	665,550	133,600	668,300	210,500	40,300	56,900	135,750	84,600	598,000	2,593,500	77,806,900
July	594,750	121,600	652,350	209,400	40,550	55,400	137,200	98,350	610,450	2,520,050	78,121,200
August	558,850	115,650	646,400	206,600	41,500	55,100	128,550	106,000	611,250	2,470,900	76,597,600
September	558,900	116,550	606,550	200,750	40,150	53,550	121,400	110,650	604,900	2,413,400	72,402,205
October	542,100	114,850	609,500	194,850	41,500	52,800	121,750	104,000	590,800	2,372,150	73,536,350
November	491,550	111,400	579,350	190,100	44,050	52,000	116,400	101,950	601,200	2,288,000	68,639,150
December	459,300	105,550	533,400	189,300	43,000	51,100	112,200	100,500	587,450	2,181,800	67,636,500
1931											
January	452,000	106,350	511,050	188,850	41,100	50,700	110,300	96,700	535,700	2,092,750	64,874,450
February	473,750	114,450	523,700	185,600	43,950	49,950	109,800	100,100	527,300	2,128,600	59,600,450
March	531,900	110,550	585,000	177,950	40,250	47,550	108,800	95,400	528,100	2,225,500	68,990,850
April	543,650	109,250	723,050	185,850	39,050	47,000	111,500	95,500	527,350	3,382,200	71,465,750
May	561,950	107,400	767,200	185,950	39,200	46,650	111,250	97,500	534,150	2,451,250	75,975,950
June	556,850	103,150	828,250	170,100	36,500	44,900	108,950	97,950	520,300	2,466,950	74,009,750
July	527,950	100,000	912,250	157,850	33,650	41,400	107,600	94,400	517,900	2,493,000	77,282,700
August 1	425,250	99,750	1,046,800	152,500	32,550	38,650	108,550	92,600	504,200	2,500,650	17,504,550
August 8	421,400	102,100	1,102,100	154,650	31,450	38,300	105,800	94,650	505,000	2,555,550	17,888,850
Aug. 15	264,500	102,850	1,188,350	154,650	30,650	37,400	109,850	93,250	517,000	2,498,500	17,489,500
Aug. 22	269,850	104,400	1,297,950	153,200	29,750	37,450	109,950	90,400	515,300	2,608,250	18,257,750
August 29	265,850	99,950	456,050	152,500	29,650	37,300	111,650	93,200	505,800	1,750,550	12,253,850
Sept. 5	256,600	98,700	461,150	151,050	29,800	37,900	114,550	93,350	503,200	1,746,300	12,224,100
Increase	....	....	5,100	.....	150	600	2,900	150	.....	.....	.....
Decrease	9,250	1,250	.....	1,450	.....	.....	.....	.....	2,600	4,250	29,750

Last Week's Daily Average Production by Districts

TEXAS	Sept. 5	
Panhandle	61,200	59,000
North Texas	54,350	55,150
West Central Texas	23,150	23,150
West Texas	209,900	206,050
East Central Texas	58,200	53,950
East Texas	Shut down	Shut down
Southwest Texas	54,350	58,750
Texas Gulf Coast	127,400	129,000
Total Texas	588,550	585,050
OKLAHOMA	256,600	265,850
CALIFORNIA	503,200	505,800
KANSAS	98,700	99,550

LOUISIANA	Sept. 5	
North Louisiana	29,800	29,650
South Louisiana	23,650	23,500
Total Louisiana	53,450	53,150
ARKANSAS	37,900	37,300
Wyoming	39,150	38,000
Montana	7,900	7,900
Colorado	4,200	4,000
New Mexico	42,100	43,300
Total Mountain States	93,350	93,200
EASTERN STATES	114,550	111,650
TOTAL UNITED STATES	1,746,300	1,750,550

Summarized Review of Field Results

State—	Completions This week	Completions Last week	Oil Wells This week	Oil Wells Last week	Gas Wells This week	Gas Wells Last week	Failures This week	Failures Last week	Initial Prod. This week	Initial Prod. Last week
Arkansas	0	0	0	0	0	0	0	0	0	0
California	6	8	4	6	0	0	2	2	1,725	17,426
Illinois	0	0	0	0	0	0	0	0	0	0
Indiana	0	0	0	0	0	0	0	0	0	0
Kansas	6	14	2	5	2	6	2	3	1,300	5,355
Kentucky	1	5	0	2	1	0	0	3	0	33
Louisiana	3	4	1	2	1	1	1	1	255	3,460
Michigan	3	3	1	1	0	2	2	0	2,500	20
Mississippi	0	2	0	0	0	0	0	2	0	0
New York	2	0	0	0	2	0	0	0	0	0
Ohio	19	13	3	3	13	7	3	3	31	40
Oklahoma	27	10	9	4	4	4	14	2	26,700	7,210
Pennsylvania	0	6	0	0	0	5	0	1	0	0
Texas	80	85	57	71	1	0	22	14	403,160	499,160
W. Virginia	6	6	1	0	4	4	1	2	3	0
Total	153	156	78	94	28	29	47	33	435,674	532,704
Increase this week	..		..		..		14		....	
Decrease this week	3		16		1		..		97,030	

Comparison of Permits Granted for New Wells

State—	Week Ending Sept. 5	Previous week	This week 1930	Total this month	This month 1930	Total this year	Total this date last year	1930 year total
Arkansas	0	1	1	0	13	26	67	108
California	4	9	18	4	93	262	590	922
Louisiana	0	11	16	0	49	222	731	948
Kansas	6	9	18	6	43	326	738	944
Oklahoma	12	3	31	12	107	582	2,227	2,830
Texas	105	154	146	105	451	4,103	5,570	7,052
Totals	127	187	230	127	756	5,521	9,923	12,804

MARKET SECTION

be resumed provided the East Texas field can supply enough for both pipe line buyers and tank car buyers.

Should the 68-cent price for East Texas oil prevail, it may be possible for some Oklahoma oil to bring the dollar price, since freight rates and other handling charges on East Texas oil will make that crude cost more than a dollar a barrel when delivered at Oklahoma refining points.

California Export Shipments Improve

California's statistical position is showing a gradual improvement, with future shipments promising to reduce stocks during the early fall months. Failure to reduce gasoline stocks during July will be offset by improved exports during August and September. Exports from South America have partially nullified the benefits which would normally have been derived from the shut-in in Texas and Oklahoma, but Panama Canal shipments are expected to increase materially. The movement of fuel oil will also show a good increase during the early fall months if Mid-Continent curtailment continues.

California's production has not been under better control for years, and even better prices than those prevailing are predicted if other sections stay within reason. The state output is not much above 500,000 barrels and only two or three fields are above their allowables.

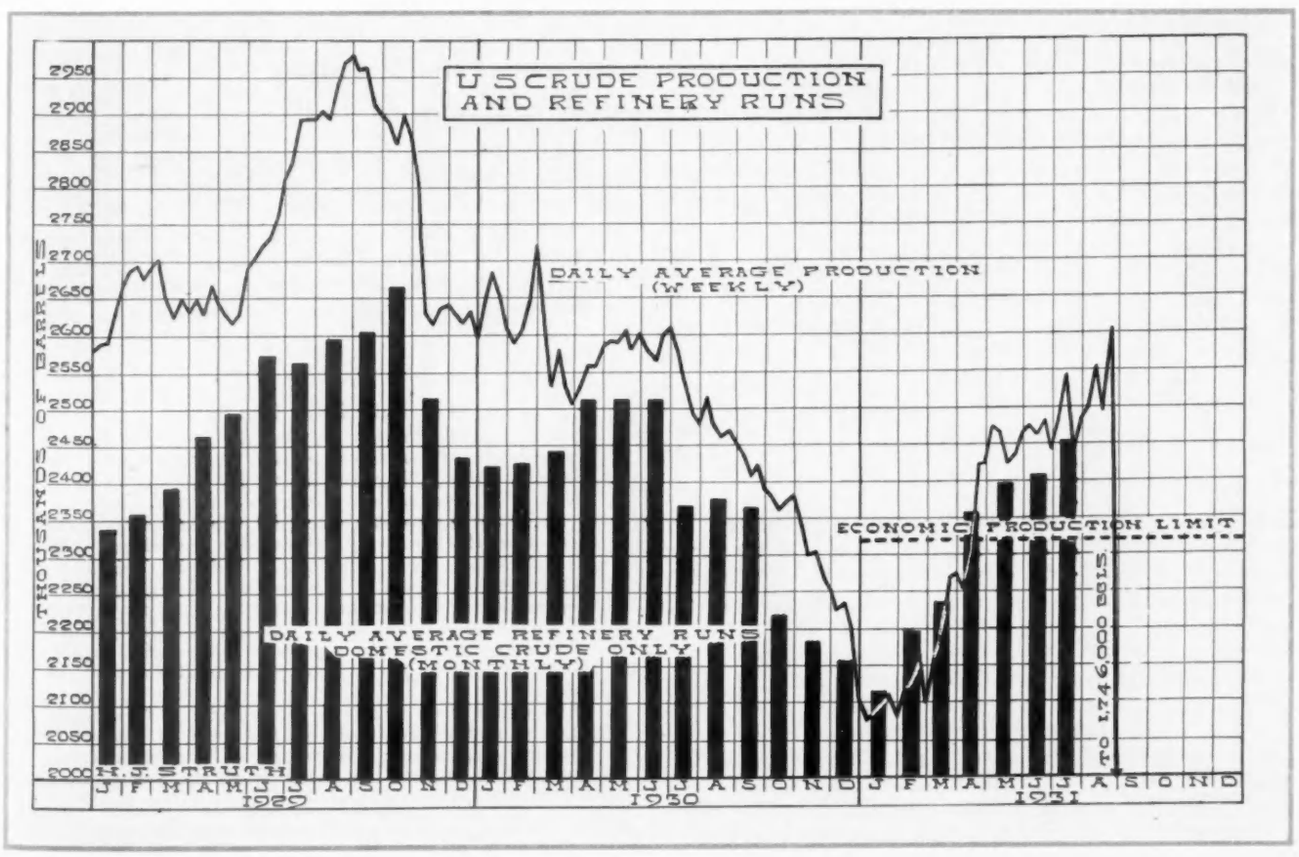
Promise of a satisfactory market for all oil produced under provisions of curtailment has done much to influence small producers. Various agencies are working together to hold a free market for the independent operator who produces within his allotment.

The merger of two leading oil companies has aroused comment which both favors and disapproves the combination. It is claimed in some circles that such a merger would ultimately adversely affect the market of the small producer. The agencies now functioning which take a neutral stand are the Oil Producers Sales Agency and the umpire's office; while the Independent Petroleum Association of California has gone on record as opposing the merger of Standard Oil Company of New Jersey and Standard Oil Company of California. The combination would undoubtedly exert a considerable influence on California markets, but there is no definite indication that such an influence would not be beneficial.

Local gasoline and fuel oil prices have stiffened slightly. Exports have bolstered domestic prices somewhat, but there is far from a shortage of crude and refined products.

California Field Developments Decline in July

Los Angeles.—Figures on oil field developments for California, compiled for July by the American Petroleum Institute, show that there were 180 active drilling wells at the end of that month and 17 rigs up, a total of 197 operations. While this represented an increase of six rigs and a decline of five drilling wells, a comparison of annual averages for preceding years shows a marked decline. For example, the average number of drilling wells during 1930 was 434, with an average of 80 rigs up, while the average for 1929 was 610 drilling wells and 109 rigs up. Well completions during July amounted to 18, against



MARKET SECTION

32 in June, while initial oil production was 63,445 barrels in July, against 62,286 barrels in June. The number of active producing wells at the end of July amounted to 8815 against 8981 at the end of June. This number of producing wells compares with annual averages of 9632 in 1930 and 10,550 in 1929. The Midway-Sunset field shows the largest number of producing wells, with a total of 1795 while Kern River and Long Beach followed with totals of 944 and 863, respectively. The Long Beach field showed a total of 17 wells drilling at the end of July.

Crude Buyers Anticipate Opening of Oklahoma City

Tulsa.—Crude oil buyers have solicitors in the Oklahoma City field seeking connections in anticipation of the date when this field will be put back on production by lifting martial law. Stanolind Crude Oil Purchasing Company is laying its gathering system to wells of Phillips Petroleum Company. Continental Oil Company is making connections with wells of West-Gate Oil Company, a concern which the former is due to purchase when titles and other arrangements can be completed.

Stanolind Pipe Line Company is looping part of its trunk line system near the Oklahoma City field in order to avoid congestion if the field is again allowed substantial output. Indications are that no change will take place in martial law shutdown of prorated fields in Oklahoma until after the conference of conservation officials of the oil producing states and representatives of the importers of crude oil at Oklahoma City September 11.

Extent of Oil Price Decline Shown

Washington, D. C.—With 1926 used as a basis of comparison, the Department of Labor Statistics shows the extent of the decline in prices of petroleum and its products. Using 1926 as 100, the index number of petroleum prices as of July, 1931, was 30.3, against 30.7 in June, 1931, and 61.0 in July, 1930. Index numbers for crude oil show a drop for California oil from 80.6 in July, 1930, to 59.6 in July, 1931, while those for Kansas-Oklahoma declined from 62.5 in July, 1930, to 12.6 in July, 1931. Pennsylvania crude prices show a decline from 60.3 in July, 1930, to 39.6 in July, 1931. Of interest in this connection is the disclosure that the wholesale price index of all commodities has shown a decline of but 14 per cent since July, 1930. The index number for all commodities stood at 70.0 in July, 1931, against 84 in July, 1930.

Smaller Initial Production Reported For East Texas

Drilling results in East Texas during the past week resulted in materially lower initial production, although the number of wells completed was practically the same as in the preceding week. Total initial production credited to new oil producing wells in East Texas during the past week amounted to 403,160 barrels, against 499,160 barrels in the preceding week.

As a result of this sharp decline, initial production of the United States declined from a total of 532,704 barrels during the week ending August 29 to 435,674 barrels during the week ending September 5. From these figures it would appear that the head is definitely off in East Texas and dissipation of pressure is destined to result in smaller wells in the future.

California Major Gas Line Projects Near Completion

Los Angeles.—Building of gas distribution lines during the coming winter will not equal the construction of a year ago, but several major projects will be finished during the fall months. Bulk of the lines to furnish San Francisco and the Bay district have been completed. The 26-inch line between Long Beach and Kettleman Hills will soon be completed. This is one of the largest gas lines ever built and the second of its size to be completed in California. Additional lines will be needed to supply various cities in the San Joaquin Valley, but this construction will not involve extensive trunk lines. Kettleman Hills has become the chief source of supply for the entire state and it is now possible to send gas to Los Angeles or San Francisco from the same well.

Investigation Seeks Data On Alleged Law Violations

Austin, Texas.—Fourteen assistants of Attorney General Allred started an exhaustive investigation of books and records of major oil companies operating in Texas, September 2, in search for evidence of alleged violations of the anti-trust laws and alleged agreements in restraint of trade. Magnolia Petroleum Company, wholly owned by Standard Oil Company of New York, and Humble Oil & Refining Company, controlled by Standard Oil Company of New Jersey, refused access to their books, claiming the controlling companies were not operating in Texas and hence were not subject to the state's laws. The investigation is being conducted under an express command of the Texas legislature.

National Transit Plans Modernization of Line

Oil City, Penna.—National Transit Company has let contracts for modernization of a six-inch line across Pennsylvania from Point Breeze, near Philadelphia, to Franklin and Pittsburgh. The work includes construction of several new pump stations. This entire project is scheduled for completion November 1. Completion of this work will materially increase the capacity of the line, company officials say.

CRUDE PRICE CHANGES

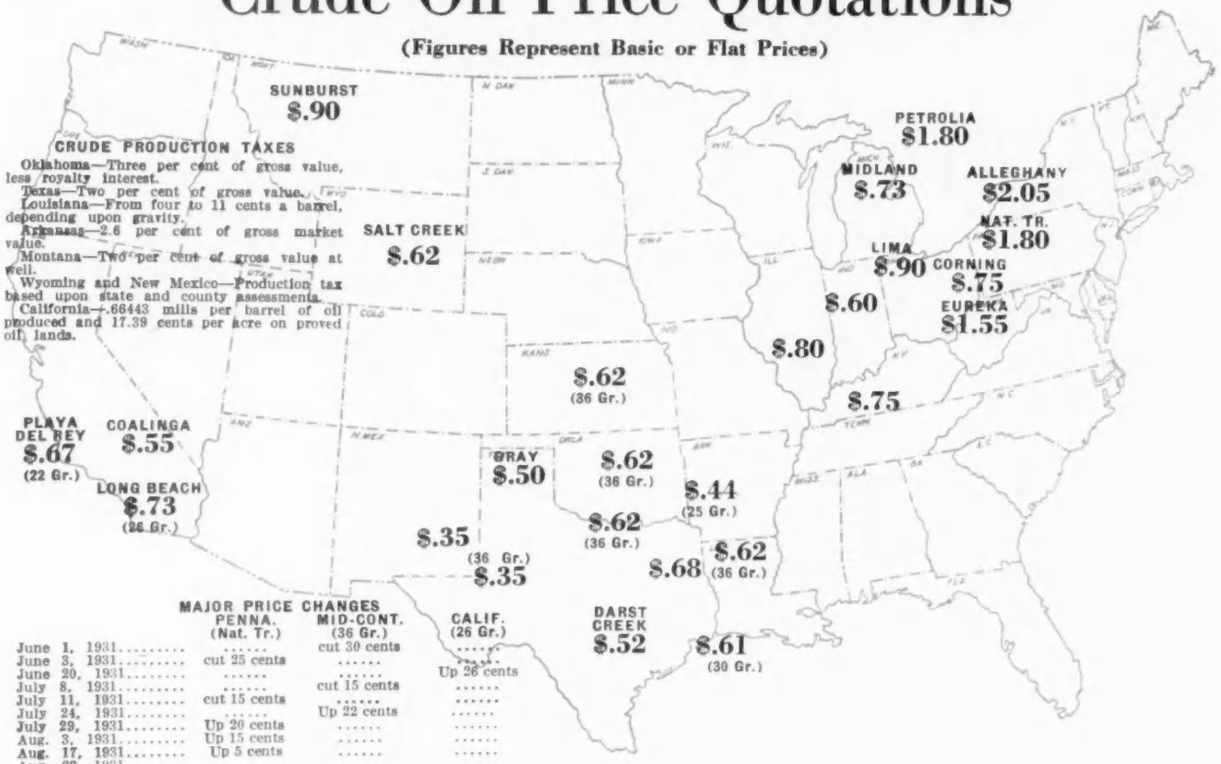
Effective September 1, Joseph Seep Purchasing Agency posted an advance of 5 cents a barrel for Corning, Ohio, oil in Buckeye Pipe Line Company's lines. The new price is 70 cents a barrel.

Effective September 2, Tidal Refining Company posted a flat price of 68 cents a barrel for East Texas crude. This schedule, previously posted by Magnolia Petroleum Company, was also adopted on September 3 by Sinclair Refining Company, Gulf Pipe Line Company and Sun Oil Company. The only major purchasing company not posting in East Texas at this time is Humble Oil and Refining Company.

Effective September 4, Joseph Seep Purchasing Agency posted an increase of 5 cents a barrel for Corning oil, making the new price 75 cents a barrel, and also increased the price of Buckeye Pipe Line Oil to $1.45; an advance of 5 cents a barrel.

Crude Oil Price Quotations

(Figures Represent Basic or Flat Prices)



CRUDE PRODUCTION TAXES

Oklahoma—Three per cent of gross value, less royalty interest.
Texas—Two per cent of gross value.
Louisiana—From four to 11 cents a barrel, depending upon gravity.
Arkansas—2.6 per cent of gross market value.
Montana—Two per cent of gross value at well.
Wyoming and New Mexico—Production tax based upon state and county assessments.
California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

MAJOR PRICE CHANGES

	PENNA. (Nat. Tr.)	MID-CONT. (36 Gr.)	CALIF. (26 Gr.)
June 1, 1931	.....	cut 30 cents	.....
June 3, 1931	cut 25 cents	.....	.....
June 20, 1931	.....	.....	Up 26 cents
July 8, 1931	.....	cut 15 cents	.....
July 11, 1931	cut 15 cents	.....	.....
July 24, 1931	.....	Up 22 cents	.....
July 29, 1931	Up 20 cents	.....	.....
Aug. 3, 1931	Up 15 cents	.....	.....
Aug. 17, 1931	Up 5 cents	.....	.....
Aug. 22, 1931	.....	.....	.....
Aug. 29, 1931	Up 5 cents	Up 24 cents	.....

Official Postings and Differentials

(Revised to September 8, 1931)

California: (Effective June 19, 1931.

Signal Hill, Seal Beach and Alamitos Heights: 14 to 22.9 gravity 65 cents; 23 gravity, 67 cents with differential of two cents for each degree upward. Top price for Signal Hill, 30 gravity, 81 cents; top price Seal Beach and Alamitos Heights, 27 gravity, 75 cents.

Huntington Beach: 14 to 21 gravity, 65 cents; 22 gravity, 66 cents with differential of two cents for each degree upward. Top price, 27 gravity, 76 cents.

Inglewood: 14 to 19.9 gravity 65 cents; 20 gravity 66 cents with differential of two cents for each degree upward. Top price, 25 gravity 76 cents.

Playa Del Rey: 19 to 20.9 gravity 65 cents with differential of one cent for each degree upward. Top price, 25 gravity, 70 cents.

Olinda and Brea Canyon: 14 to 19.9 gravity 65 cents; 20 gravity 66 cents; 21 gravity 67 cents; 22 gravity 68 cents with differential of two cents for each degree upward. Top price, 28 gravity, 80 cents.

Coyote Hills: 14 to 22.9 gravity 65 cents; 20 gravity 66 cents; 21 gravity 67 cents with differential of two cents for each degree upward. Top price, 28 gravity, 79 cents.

Santa Fe Springs: 24 to 26.9 gravity 65 cents; 27 gravity 68 cents; 28 gravity 71 cents; 29 gravity 73 cents; 30 gravity 75 cents; 31 gravity 78 cents; 32 gravity 80 cents; 33 gravity 83 cents; 34 gravity 85 cents; 35 gravity and above 87 cents.

Whittier, La Habra and Montebello: 65 cents a barrel.

Torrance: 14 to 21.9 gravity 65 cents with differential of one cent for each degree to 25 gravity and two-cent differential for 25 gravity. Top price, 25 gravity, 70 cents.

Richfield: 14 to 20.9 gravity 65 cents; 21 gravity 66 cents with differential of two cents for each degree upward. Top price, 25 gravity, 74 cents.

Elwood: 33 gravity 79 cents; 34 gravity 81 cents with differential of three cents for each degree upward. Top price, 36 gravity, 87 cents.

Newhall, McKittrick and Kern River: 55 cents a barrel.

Midway-Sunset, Elk Hills and Buena Vista Hills: 14 to 21.9 gravity 55 cents; 22 gravity 56 cents; 23 gravity 58 cents; 24 gravity 61 cents; 25 gravity 64 cents; 26 gravity 66 cents; 27 gravity 68 cents; 28 gravity 71 cents; 29 gravity 74 cents; 30 gravity 76 cents.

Los Hills: 14 to 20.9 gravity 55 cents; 21 gravity 57 cents; 22 gravity 59 cents; 23 gravity 60 cents; 24 gravity 62 cents; 25 gravity 64 cents; 26 gravity 66 cents; 27 gravity 67 cents; 28 gravity 69 cents; 29 gravity 71 cents; 30 gravity 72 cents.

Coalinga: 14 to 24.9 gravity 55 cents; 25 gravity 57 cents.

Wheeler Ridge: 55 cents a barrel.

Athens, Dominguez and Rosecrans: 24 to 24.9 gravity 69 cents with differential of two cents for each degree upward. Top price, 34 gravity, 89 cents a barrel.

Oklahoma, Kansas, North Texas (Effective Aug. 22, 1931).

Flat Prices.

Oklahoma: Cushing, Yale, Oklahoma City, Morrison, Wewoka and Seminole: 68 cents. **Cement, Duncan, Walters:** 60 cents; **Healdton:** 37 cents; **Hewitt and Graham:** 52 cents.

North and Central Texas: Burkburnett, Archer, Stephens, Henrietta, Electra, Comanche and Olden: 68 cents; **East Texas:** 68 cents.

Gravity Scale Prices: Below 28 gravity 44 cents a barrel with differential of 2 cents for each degree beginning with 28 and ending with 40 gravity and above. Top price 70 cents a barrel.

Texas Panhandle: (Effective Aug. 22, 1931).

Gray County: Below 35 gravity, 46 cents with differential of 2 cents for each degree beginning with 35 and ending with 40 gravity and above. Top price 58 cents a barrel.

Carson and Hutchinson Counties: Below 35 gravity, 41 cents with differential of 2 cents for each degree beginning with 35 and ending with 40 and above. Top price 53 cents a barrel.

West Texas: (Effective Aug. 22, 1931.)

Crane, Upton, Crockett, Ector, Howard, Glasscock, Pecos and Winkler Counties, Texas, and Lea County, New Mexico, 35 cents flat.

Southwest Texas: (Effective Aug. 22, 1931.)

Refugio heavy oil 60 cents a barrel.

Refugio light oil—same as Gulf Coast (see below).

Gulf Coast: (Effective Aug. 22, 1931.)

Goose Creek, Hull, Liberty, Orange, Pierce Junction, Mykawa, Moss Bluff, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugarland, West Columbia, Humble and Refugio Light: Below 25 gravity 55 cents, with differential of 1 cent for each degree beginning with 25 gravity and ending with 35 and above. Top price, 66 cents a barrel.

Mirando: 60 cents; **Salt Flat,** 52 cents; **Darst Creek,** 52 cents; **Pettus:** 70 cents; **Markham:** 52 cents.

East Texas: (Effective Sept. 2) flat price, 68 cents.

North Louisiana and Arkansas: (Effective Aug. 22, 1931.)

Caddo, Homer, Haynesville, Bull Bayou, Sabine, Cricton, De-Soto, El Dorado, Cotton Valley, Sarepta, Cartersville: Below 29 gravity 44 cents with differential of 1 cent for each degree beginning with 29 gravity and ending with 40 and above. Top price 70 cents a barrel.

Smackover: 52 cents.

Rocky Mountain States: (Effective Aug. 22, 1931).

Salt Creek: Below 29 gravity 46 cents; 38 gravity and above 66 cents.

Elk Basin and Grass Creek: 90 cents; **Big Muddy:** 68 cents; **Lance Creek:** 105 cents; **Rock Creek:** 70 cents; **Sunburst:** 90 cents; **Osage:** 98 cents; **Cat Creek:** 65 cents; **Pondera:** 70 cents; **Hogback, New Mexico:** 72 cents.

Eastern States: (Effective Aug. 24, 1931).

Lima: 90 cents; **Indiana:** 60 cents; **Illinois:** 80 cents; **Princeton:** 80 cents; **Wooster:** $1.00; **Western Kentucky:** 75 cents.

Pennsylvania: (Effective Sept. 4, 1931). **Bradford District:** $2.05; **National Transit oil:** $1.80; **Southwest Pennsylvania Pipe Line oil:** $1.65; **Eureka Pipe Line oil:** $1.55; **Buckeye Pipe Line oil:** $1.45; **Corning crude:** 75 cents.

Michigan: (Effective Aug. 22, 1931). **Midland:** 73 cents a barrel. **Muskegon:** Same posting as Mid-Continent; 44 cents to 70 cents a barrel.

Canada: (Effective Aug. 24, 1931)..

Petrolia: $1.80; **Oil Springs:** $1.87.

Summary of Field Operations, August, 1931

▼ ▼ ▼

Summary of Field Operations—August, 1931
Recapitulation—United States

State	Month of August: Completions	Producers	Gas Wells	Failures	Initial Production Oil	Gas*	Total Production (a)	Cumulative—January to August, Inclusive: Completions	Producers	Gas Wells	Failures	Initial Production Oil	Gas*	Total Production (a)
Oklahoma	52	24	13	15	93,080	208	9,608,150	816	388	143	285	1,641,685	527¾	120,080,000
Kansas	59	28	22	9	34,675	208	3,164,750	338	153	93	92	138,160	122¾	26,013,100
Texas, Outside of Gulf	490	412	7	71	2,799,152	152¼	30,270,750	3268	2250	145	873	13,266,818	308¾	177,256,900
Gulf Coast	45	15	..	30	16,620	....	4,762,500	479	234	8	237	150,460	210½	42,661,550
North Louisiana	16	2	7	7	1,612	131¾	942,150	198	44	60	94	18,779	121½	9,222,600
Arkansas	3	..	..	3	.....	...	1,166,400	64	27	8	29	2,621	65½	11,095,950
Eastern States	203	42	106	55	2,239	221¾	3,392,600	2043	556	929	558	23,686	1782	26,652,850
Rocky Mountain States	(b)	(b)	(b)	(b)	(b)	(b)	2,879,500	(b)	(b)	(b)	(b)	(b)	(b)	23,361,900
California	31	22	..	9	84,384	...	15,817,500	270	228	...	42	357,209	....	127,633,300
Total	899	545	155	199	3,031,762	1025¾	72,004,300	7476	3880	1386	2210	15,599,418	8106¼	563,978,150

*Millions of cubic feet.
(a)—Preliminary—subject to revision.
(b)—Not available.

August Initial Boosted By East Texas Activity

Drilling activity in East Texas during August was responsible for a further gain in initial oil production of the United States. The completion of 384 new wells in East Texas resulted in an initial production during August of 2,785,275 barrels, an increase over July of 341,000 barrels. A total of 899 wells was recorded for the United States during August of which 545 were producing oil wells. The total initial production of these wells was 3,031,762 barrels, compared with a total of 2,720,113 barrels in July. The number of wells completed in East Texas during August was the largest in the history of that field, with initial production hovering at the peak rate recorded last May, when the total 24-hour recovery amounted to 2,791,610 barrels.

Cumulative results for the first seven months of this year show that 7,476 wells were completed in the United States and 3880 of these wells proved to be producers. The total quantity of new oil production credited to producers completed during this period was 15,599,418 barrels. Comparison of cumulative results for last year with this year shows that the completion of only half as many wells this year has resulted in more than twice the amount of new oil production. Last year, well completions for this period totalled 14,260 and initial oil production amounted to but 6,475,877 barrels.

Despite the large number of new wells completed during August, daily average production of crude oil in the United States was maintained at a total of 2,322,800 barrels, a decline under July of 171,000 barrels a day. Total production for the first seven months of this year amounted to approximately 563,978,150 barrels, whereas the total for the same period of last year amounted to 625,704,950 barrels, or 61,726,800 barrels more than has been produced this year. Production for August is estimated at a total of 72,004,300 barrels, against 77,282,700 barrels in July.

Past Twelve Months

The record for the past 12 months is an interesting study for comparative purposes, the following table giving the field statistics for all states:

Month—	Completions	Producers	Gas wells	Failures	Initial Prod.
August, 1930	1,837	930	310	597	1,160,055
September	1,165	619	208	338	833,109
October	1,199	587	245	367	615,002
November	1,253	644	217	392	901,046
December	1,479	650	310	519	979,111
January, 1931	1,156	519	211	426	796,860
February	815	348	192	275	459,727
March	819	347	153	319	704,526
April	905	479	164	262	1,858,297
May	1,095	594	212	289	3,075,384
June	987	593	160	234	2,999,552
July	821	469	140	212	2,720,113
August	899	545	155	199	3,031,762

*—Rocky Mountain figures not available.

United States Production

State—	Total Production August*	Daily Average August*	Daily Average July
Oklahoma	9,608,150	310,000	527,950
Kansas	3,164,750	102,100	100,000
Texas (Outside of Gulf Coast)	30,270,750	976,450	912,250
Gulf Coast	4,762,500	153,650	157,850
North Louisiana	942,150	30,400	33,650
Arkansas	1,166,400	37,600	41,400
Eastern States	3,392,600	109,450	107,600
Rocky Mountains	2,879,500	92,900	94,400
California	15,817,500	510,250	517,900
Total	72,004,300	2,322,800	2,493,700

*—Preliminary—subject to revision.

EAST TEXAS COMPLETIONS AND PRODUCTION

County or Field—	Total Completions Jan.-Aug.	Total Initial Production Jan.-Aug.	Total Production Jan.-Aug.
Gregg	32	256,500	.....
Joiner-Bradford	522	3,029,915	21,444,100
Kilgore	650	5,533,990	26,845,900
Longview	344	2,993,775	12,690,350
Rusk	162	965,036	.....
Total	1,710	12,779,216	60,980,350

Will Hold East Texas Output Below 400,000 Barrels

(*Continued from page* 14)

Considerable surprise was expressed that Governor Sterling would permit enforcement of the order, as it was the same order which he had condemned two days earlier with exception of the gas-oil ratio control section, which was expected to have no material effect on its operation. He had stated that such an order would induce an unprecedented drilling campaign, and that the field might be ruined within a short time, with independent operators suffering particularly through necessity for financing drilling of many wells.

Early Wednesday morning, September 2, prior to announcement of its conservation order, the railroad commission had sent a letter to Governor Sterling requesting the following information: The names of the land owners, lease holders and operators in the proven field, the amount of oil in storage held by each operator, the number of wells each operator owns or controls and the date of completion of each well, the water conditions of each well and percentage of water produced by those having that trouble, the estimated potential of each well, the amount of oil produced by each well, the estimated gas-oil ratio of each well, the estimated amount of gas used each day in producing each well, the disposition of the gas from each well, the amount of acreage held by each operator, land owner or lease holder in the proven field, details of the pipe line connections of each well and the pipe line ratio, the size of the tubing in each well, the bottom-hole or tubing pressure in each well, and the quantity of oil shipped by each operator and to whom sold.

The commission requested Governor Sterling to gather this information with the troops, and he assured them that he would give them what he could, although he expressed surprise that much of this data was not already in the commission's own files. The request was prepared by Pat M. Neff and was signed by the other commissioners.

The list of appointments of employees in the field by the railroad commission was as follows: O. H. Burkett, A. B. Capers, V. E. Cottingham, W. P. Laughter, Luther Swift, S. W. Barr, R. C. Bowles, L. K. Milhollon, R. E. King, Paxton Gray, H. W. McCurley, Luther Bellew, J. N. Parineau, M. N. Shelton, Grady Russell, Horace Camp, Howard Van Zandt, B. D. Byrne, B. B. Bikerstaff, Paul Phillips, A. E. Amos, George Phillips, and W. R. Tandy.

East Texas Order Expected to Be Short Lived

(*Continued from page* 16)

level. Exact data in this connection is to be furnished the deputy oil and gas supervisor in whose territory the well is located.

With regard to producing the oil, the provision is made that no air or gas lift artificially applied may be used in the field.

Recognizing the hazards to life and property which have manifested themselves in the past in the East Texas field through fatal and destructive blowouts and fires, the railroad commission laid down five separate rules controlling completion of wells. In the first place, no well is to be permitted to clean itself and begin flowing oil into or upon the derrick or derrick floor, and in cleaning itself the flow is to be through a choke and an outlet is to be provided with a terminus into a pit at least 40 feet from the edge of the derrick floor or from any building, tank, or other structure which might constitute a fire hazard. Other provisions in connection with bringing in wells are as follows. Each well is to be equipped with a blow-out preventer before drilling into the oil producing sand. No boiler or electric generator shall be placed nearer than 150 feet to any producing well, and before any well is brought into production boilers must be moved back to conform with this rule.

A separate specific rule provides that all wells must be completed in the daylight hours before sunset. Finally, no well is to be brought into production until a duly authorized agent of the railroad commission shall issue a permit to the effect that such well has been properly completed and equipped in accordance with the rules and regulations of the commission, the agent of the commission being allowed a maximum period of 72 hours in which to make the inspection, after which the operator is at liberty to bring the well in without the permit.

New Order Allows Large Waste Of Rich Gas in East Texas

Testimony presented to the Texas legislature at Austin recently indicated an average gas-oil ratio of 343 cubic feet of gas per barrel of oil for 25 individual wells in the East Texas field. Gas-oil ratio reported from a large number of wells indicated a minimum of 106 feet of gas per barrel of oil and a maximum of 603 feet per barrel of oil produced.

The Texas Railroad Commission, in its order governing production of oil in the field and permitting production of 225 barrels of oil per well, stated that evidence offered in regard to gas-oil ratios was inadequate and incomplete, but limited gas production by the statement "No well shall be produced with a gas-oil ratio higher than 700 cubic feet of gas per barrel of oil."

At the average gas-oil ratio reported as evidence at Austin, of about 350 cubic feet of gas per barrel of oil, and with 1760 producing wells the field should yield 139,600,000 cubic feet of natural gas when the average production of oil is 225 barrels per well (396,000 barrels per day).

Under prevailing conditions in the field this gas is wasted in the atmosphere or burned through flares, exceepting for small quantities of gas used as fuel in field operations. It is reported that this gas is relatively rich in gasoline content and may average five gallons per 1000 cubic feet. Evidence at the hearing pointed to gasoline content ranging from four gallons to eight gallons per 1000 feet.

The relatively low yields of gas per well, and the knowledge of field conditions as experienced in other Woodbine sand fields where gas production has always been short lived, have contributed much to the hesitancy of gasoline manufacturers in erecting natural gasoline extraction plants in this territory. Also the price of natural gasoline during the early period of exploitation of the East Texas producing area has not invited plant construction.

Although the natural gas may be relatively rich in gasoline content, there is much to indicate that gas production will not endure over a period of several years, and that gasoline yield per 1000 cubic feet of gas may decrease as the field grows older. These factors have tended to offset the advantage of rich gas production and retarded the establishment of gasoline plants. Recent developments, however, point to the early erection of such equipment in the field.

The factors that lend importance to gas production in this field are the richness of the gas and the great size of the field. With 1760 producing wells at the time of this writing, having an average gas-oil ratio of approximately

350 cubic feet of gas per barrel of oil, the East Texas field production of natural gas estimated at 139,600,000 cubic feet will yield 69,800 gallons of natural gasoline daily, based on the reported average gasoline content of five gallons per 1000 feet. At 5 cents per gallon this gasoline would be worth $34,900 per day. Prior to military occupation of the area this gas, and gasoline, has been wanted. Should the average gas-oil ratio for the field reach the maximum allowed by the railroad commission of 700 cubic feet of gas per barrel of oil, then the present estimated gas production will be doubled, and until such time as gasoline extraction plants are placed in operation, the value of the gas and gasoline content, wasted daily, will also be doubled.

Late developments in the gasoline industry which have contributed to an increase in gasoline price from less than 3 cents per gallon to above 5 cents per gallon have brought the possibilities of East Texas to the attention of natural gasoline manufacturers, and gas testers and inspectors for a number of companies have been busy sizing up the situation. It is possible that within the near future the waste of gasoline and gas may be lowered and perhaps stopped. With the total gas production at present of only 200,000,000 to 300,000,000 cubic feet per day, two or three large natural gasoline plants could easily handle all of the production were it not for the great area of the field. In East Texas it is probable that a large number of smaller units will have to be erected to handle the rich gas. Perhaps the majority of these plants will be of the two or three-absorber type, handling 10,000,000 to 20,000,000 cubic feet per day. Some of the gasoline plants will be of the compression type, inasmuch as the rich gas lends itself well to this method of processing.

In addition to the two compression type plants being erected in the area by Humble Oil & Refining Company, plants are being proposed by Stanolind Oil & Gas Company, Marine Corporation, Magnolia Petroleum Company, Phillips Petroleum Company and others. Negotiations were under way last week for Roeser-Pendleton, Inc., Arkansas Fuel Company and Yount-Lee Oil Company to jointly erect a 10,000,000 cubic foot capacity plant in the Longview section of the field, where the companies have adjoining properties. The Roeser-Pendleton organization has an idle absorption type, natural gasoline plant in Shackleford County, Texas, and reports state that equipment from this plant would be utilized in the erection of the East Texas plant.

Commission Sets September 23 As Date For Pipe Line Hearing

Austin, Texas.—The railroad commission, September 8, set Wednesday, September 23, as the date for the hearing on pipe line rates in Texas. Charges for transportation, gathering and delivery on all lines in Texas will be fixed following this hearing, and will remain in effect until such time as the commission is able to place an engineer in the field to properly evaluate properties and to investigate earnings, expenses, income, depreciation and other accounting records, and thereby fix values on common carrier pipe lines to form a basis for rates.

The petition of the Independent Petroleum Association for a 50 per cent reduction in pipe line rates which was filed in April will be considered, although there has been a general reduction in rates since that time.

Suitable orders and regulations will be issued to prevent discrimination and to properly control the pipe lines operating in the state of Texas, as directed by the terms of the recently enacted Pollard pipe line bill.

California Organizations Divided on Proposed Standard Merger

(*Continued from page 24*)

Oil Company of California in such a merger will depart from its past practices of honest dealing and fair treatment of independent oil producers and the public.

"The size alone of a company does not mean that the conduct of its business is oppressive or that its aim is to monopolize business.

"Standard Oil Company of New Jersey operates in the Mid-continent and on the Atlantic Seaboard, and Standard Oil Company of California on the Pacific Coast. We are informed that the operations of the two companies overlap only in Texas. We believe that any merger between such companies would inevitably lend a stabilizing influence to national phases of the industry, and be of great help in preventing wasteful practice in the industry.

"It is a matter of common knowledge that the combined companies would have an immense fleet of seagoing ships, which could carry United States commerce to the seven seas, and furnish a world outlet for the products of California.

"The need of the industry is more markets for products. We have plenty of oil; but we need more outlets. If this merger or any other will provide such outlets in foreign lands, we will all be benefited.

"The public is interested vitally, more so than it realizes, in the welfare of the oil industry on account of the large number of persons employed by it, and their great wage earning power. This has been emphasized in Southern California during the recent month by the large number of people in the industry being thrown out of employment because some oil operators persistently violated fundamental business principles, and involved the entire industry through ruthless over-production, and otherwise.

"It is only when the supply and demand of oil is balanced through proper and fair stabilization agencies that these conditions can be corrected. If the honest merger of two strong companies, either these companies or others, whose operations do not serve the same territory can aid in preventing a recurrence of the recent disastrous conditions in the oil business, this agency sees no reason to oppose it, nor why any person or group, sincerely interested in the permanent welfare of the industry, should oppose it.

"Oil Producers Sales Agency of California has no entangling alliances. Its policies cannot be expected to be in full accord with the views of all people interested in the oil industry. It wants to relieve the distress of those engaged and those employed in the oil industry through collective bargaining for its members, with the hope that it will result in a fair market for all the oil they produce under proper curtailment based upon supply and demand. The Agency has no quarrel and holds no brief for any other interest in the oil industry and it is not content to let those in the business who are unwilling to observe the principle of fair play attempt to undermine the proper stabilization of the business by raising false issues.

"Oil Producers Sales Agency of California represents and speaks for that preponderating number of California independent producers who are curtailing production to the end that production be balanced with markets and that each have his fair share of the markets. Any proper step in the industry which will increase these outlets is looked upon with favor."

*Rubbers are brought together evenly and with equal pressure

GUIBERSON WIRE LINE OIL SAVER

This feature alone is one of the greatest factors in marking the Guiberson Wire Line Oil Saver as a distinct advance over all present equipment. The rubber bill is the big bill with an oil saver and the Guiberson reduces it to a minimum. Cleanliness around the well is not only a saving in oil but reduces the fire and accident hazards, which sometimes draw an enormous cost penalty. If there is one single reason that can be given all the credit for the introduction of the Guiberson Wire Line Oil Saver, it is the method of bringing together the packing rubbers. Upon it rests the claims for new found efficiency and economy, while simplicity of operation is an age-old feature of Guiberson design.

* Rubbers are brought together evenly with equal pressure, insuring perfect packoff and long life of rubbers. Wonderful efficiency feature in reduced rubber bill, saving of oil and cleaner conditions around well.

Operation is very simple and easy. The force applied to the crank is transferred to the line through the rubbers with very little friction loss, making it possible to pack off against the highest pressure.

Bronze guide block gives greater protection to the wire line and minimizes fire hazard due to the absence of sparks.

Bottom rubbers, made for that purpose only, may be screwed in to seal up the fluid while the upper rubbers are being changed. They are not to be used while the line is in motion through the saver.

Furnished in three sizes, with detail parts on the three sizes interchangeable. Patent Pending.

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BETTER BE SAFE THAN SORRY

Plans to Kill Discovery Well Of Big Lake Field, West Texas

San Angelo, Texas.—Preparations were going forward early this week for the killing of the discovery well of the deep oil and gas horizon in the Big Lake field, West Texas, in order to comply with orders from state authorities calling for a reduction in the gas-oil ratio in the field. Group One Oil Corporation's (Continental Oil Company) University 1-B discovered the prolific deep horizon late in November, 1928, at 8523 feet, and held the record of being the deepest producer in the world for months. It has yielded about 2,600,000 barrels of high gravity oil to date, and is now averaging about 2200 barrels of 47 gravity oil with 16,500,000 cubic feet of wet gas daily, flowing against 190 pounds back pressure. The gravity has decreased 10 degrees in recent months.

Application of greater back pressure on the discovery well as a means of lowering the gas withdrawal is not deemed safe by the owner, owing to the fact that the well has about 2339 feet of open hole, and the 5-3/16-inch pipe serving as the oil string is badly worn by cable tool drilling in this and other tests that it served. The surface connections and fittings on the well also are inadequate, having been installed before the well blew itself into a big oil and gas producer. A 122-foot steel derrick, cellar and slush pit are being built on the location to try and insert tubing in the hole under the Otis method, then kill the production with mud and other heavy admixtures. No effort will be made to restore the well to production, as the company has sufficient production from one other deep producer and its shallow pumpers to fulfill crude contracts. However, it is later planned to pull all the 6⅝ and 5-3/16-inch casing that is possible, then sidetrack and deepen the hole to the lower lime pay horizon, where it is possible to get prolific production with a comparatively low gas-oil ratio. Group One Oil Corporation has two deep producers killed and shut in, while Big Lake Oil Company has capped two of its deep wells in order to hold oil production to contracted outlets, and especially to conserve the gas flow.

Cement Pool, Oklahoma, Test Now Third Deepest in World

Ardmore, Oklahoma. — Mid-Kansas Oil & Gas Company and Ramsey Petroleum Corporation were drilling at 9555 feet in sandy shale in Preston-Culp 6, NW NW NE Section 6-5n-9w, in the old Cement pool in southeastern Caddo County. The last core was taken at 9365 to 9380 feet where operators recovered three feet of limestone, 8½ feet of sandy shale, and six inches of sandy lime. Tentative correlations place the bottom of the hole in the lower Deese of Pennsylvanian age.

The test now holds all depth records outside California and Mexico. Record in the former is held by Chanslor-Canfield-Midway Oil Company's Hobson A-2, at Rincon, which was the first well ever to drill below 10,000 feet. Its total depth was 10,030 feet in a 4¾-inch hole.

The present world depth record is held by Penn-Mex Fuel Company's Jardin 35, near Tuxpan on what is known as the southern extension of the "Golden Lane." It is now temporarily shut down at 10,585 feet with an 8 9/16-inch hole. The Mid-Kansas-Ramsey test is drilling in an eight-inch hole which is open from 5313 feet where nine-inch casing was cemented. This permits the use of two additional strings and should enable the operators to penetrate to a greater depth than the present record.

DR. E. R. Lederer, vice-president in charge of the refining and natural gasoline departments of Texas Pacific Coal and Oil Company, Fort Worth, Texas, was the speaker at the San Antonio Geological Society meeting in San Antonio, Texas, September 7. His subject was "Oil Refining—Or What Happens To a Barrel of Oil Before It is Marketed at Retail."

DR. E. R. LEDERER

Mr. Lederer was born and reared in Vienna, Austria, graduated from the University of Heidelberg as chemical engineer in 1904, and at the University of Vienna as doctor of science and mechanical engineer in 1905.

He was in the employment of Vacuum Oil Company in Galicia and Roumania from 1905 to 1912, when he went to Standard Oil Company of New Jersey as assistant to the chief chemist at the Bayonne refinery.

In 1914 he was made chief chemist and assistant general manager of Atlantic Refining Company's Franklin, Pennsylvania, plant. In the fall of 1916 he went with Galena-Signal Oil Company and constructed the first refinery on the Ship Channel at Houston. He managed this refinery during the war and was successful in developing a special aeroplane machine gun oil, which first was shipped to the Allies, and after we entered the war, to our own forces.

In the fall of 1919, until 1921, he was manager of the oil department of the Atlantic Gulf Oil Corporation with headquarters in New York, but spent most of his time constructing the 10,000-barrel refinery at Tecomate on the East Coast of Mexico, pipe lines from Amatlan, sea loading lines, terminals, and for the English Agwi a refinery and sea terminal at Fawley near South Hampton, England.

In 1922 to 1925, he was vice-president of Louisiana Oil Refining Corporation at Shreveport, Louisiana, constructed the first vacuum plant for salt dome naphthene base lubricating oils.

Since 1925 he has been vice-president in charge of manufacturing for Texas Pacific Coal and Oil Company, constructed the lubricating plant in Fort Worth, was successful in developing a new patented process for the manufacture of zero cold test paraffin base lubricating oils for aeroplanes and automobiles.

He has published several papers before the American Petroleum Institute, American Institute of Mining and Metallurgical Engineers, American Chemical Society, American Society of Mechanical Engineers, Society of Automotive Engineers, and the American Institute of Chemical Engineers.

He is also a member of the Institution of Petroleum Technologists of England. He was president of the Natural Gasoline Association of America for two years, and has been a director of this organization since 1925.

C. H. GLEASON is the new representative for Columbian Steel Tank Company in the Rocky Mountain region. He has established offices in Denver. Mr. Gleason succeeds Paul Harrington who is conducting warehousing facilities for various freight trucking companies in Denver.

Personal Mention—Men You Know

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R. C. STONER was recently appointed general production manager of The California Company, effective September 1.

J. M. ATWELL, vice-president of The California Company, retired recently after 43 years of continuous service with the organization.

B. T. EHRNMAN, who was formerly located in the Chicago office of the International-Stacey Corporation of Columbus, Ohio, has been transferred to St. Louis as division manager of that company with offices at Room 2192 Railway Exchange building.

Mr. Ehrnman has been associated for a number of years with the Roots-Connersville-Wilbraham division of this company in the sale of gas pumps, meters, blowers and other equipment. With the opening of the St. Louis office he will also have charge of the sale of Ideco oil and gas drilling and pumping equipment, Stacey Brothers equipment in addition to the Roots-Connersville-Wilbraham line of products.

T. W. WILSON, field superintendent for Continental Oil Company at Mexia, Texas, has been transferred to Longview to take charge of the company's operations in the East Texas field, where three wells have been completed. L. H. Jones, who has been superintendent for the company in the Corsicana-Powell field, will have his duties enlarged to include the Mexia properties.

W. R. BOWDEN, deputy oil and gas supervisor for the Texas Railroad Commission in charge of the 12 counties comprising the Midland section of West Texas, has been appointed proration umpire, succeeding A. B. Capers, who has been transferred to the East Texas field.

V. E. COTTINGHAM, who has been associated with Glenn O. Briscoe in geological consulting work in West Texas, with headquarters at San Angelo, Texas, has been appointed a deputy supervisor of the oil and gas division of the Texas Railroad Commission, and assigned to the East Texas field. Prior to engaging in consulting work, Cottingham served with Empire Gas & Fuel Company, Shell Petroleum Corporation and The Exploration Company of Texas.

E. R. STANLEY, and Harry P. Stolz have announced the opening of offices for the general practice of petroleum and mining engineering. Quarters have been established in the Security Building, Los Angeles. Stanley was for several years associated with George F. Getty, Inc., and Macmillan Petroleum Corporation, as petroleum engineer. Stolz was formerly chief petroleum engineer for Sunset Pacific Oil Company and its subsidiaries.

WILLIAM C. WHALEY and R. A. Broomfield, Jr., have been elected vice presidents of Barnsdall Oil Company of California. This fills the vacancy created by the death of F. A. Fortine and adds one new office. Broomfield is a graduate of the University of Southern California and is a geologist. Whaley studied law at the same university. Both started with the company in 1924.

MARTIN DIETRICH, well known in leasing, producing and royalty circles in California, has moved his office from the Bartlett Building to the Title Guaranty Building, Los Angeles.

S. E. MERENBACH, consulting geologist and petroleum engineer, will conduct a night course in petroleum engineering at the University of Southern California during the fall term, beginning September 21.

THEODORE CHAPIN, geologist for Cities Service Company, has been spending some time in Washington and Oregon.

W. S. ACKERMAN on August 19, celebrated the twenty-fifth anniversary of his connection with Associated Oil Company. It was on August 19, 1906, that he became an office boy in the service of the late F. B. Henderson, then general manager of Amalgamated Oil Company, which was affiliated with Associated Oil Company. The office of the former company was in Los Angeles. Mr. Ackerman is now assistant to H. T. Earl, manager of transportation for the latter company in the headquarters office at San Francisco.

In 1910, he was transferred to the accounting department and in 1912 changed his duties to oil clerk in the old Los Angeles refinery. In 1913 he was store clerk in the Salt Lake field and in 1916 returned to general office work. Mr. Ackerman was made superintendent of shipments and purchasing agent in 1918 and in 1920 became office manager in Los Angeles. In 1922 he was assistant to the manager, which position he held until Amalgamated Oil Company disincorporated in December, 1923, at which time he was placed in charge of automotive equipment for the Associated Oil Company at Los Angeles.

W. S. ACKERMAN

In January, 1927, he was transferred to the general offices at San Francisco in charge of the statistical department until March, 1928, when he was promoted to his present position. He is very proud of the growth of his company during the past 25 years, and he is well and favorably known to practically every official and employe of the company, who know him as Billy. He was born in Brooklyn, New York, August 27, 1892, is married and has two sons, 7 and 14 years of age, respectively.

Oklahoma--Kansas Field Notes

FLOYD SWINDELL, ***Staff Representative, Tulsa, Oklahoma***

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Shut-Down One Month Old; Dollar Oil Not In Sight

Oklahoma City—Saturday, September 5, brought to a close the first full month of shut-down in the Oklahoma City pool under executive order. It is difficult to foretell at this time just how near is the goal of $1.00 oil.

Operators in the pool were optimistic over the chances for a higher price until Governor Sterling of Texas sent out word that the new railroad commission order of 225 barrels per well would be tried out in East Texas. It is understood that, with few exceptions, all wells in that great area will make 225 barrels per day and Oklahoma oil men are expecting a pick up in drilling activity which is more than likely to take production above 500,000 barrels daily within a short time.

Overtures are being made to Governor Murray, through Cicero I. Murray, his cousin and oil advisor, in regard to compromise on a lower price but it is doubtful that such a move will be successful since the governor has emphatically stated in several of his recent press conferences, that he will not open the fields until $1.00 per barrel is the general posting and he has hinted that the state may go into the refining and marketing business through the building of its own refining and distributing facilities.

The Oklahoma City pool has taken on the appearance of a giant at rest. Check of the field Saturday morning, September 5, showed only 26 wells drilling and a total of 60 operations including locations rigs, and rigging up. At that time the total number of completions stood at 829. Recent completion of Phillips Petroleum Company's and Shell Petroleum Corporation's Egermeier 1, SW SW SW Section 23-11n-3w, opens a new area for development. This portion of the pool along with the important north end would be the scene of probably a hundred or more drilling wells under normal conditions.

Not all of the inactivity however, can be traced to the shutdown. Financial difficulties had previously overtaken a number of the smaller operators due to the low price of crude and proration regulations which held allowable production to small percentages of the total potential. A considerable number of lease transactions and taking over of shut-down wells have been reported in recent weeks.

Four wells were completed during the past week and one old producer plugged back and recompleted as a gas well in the Layton Series. Morgan Petroleum Company's Bisbee 1, NW SE NW Section 3-11n-3w, encountered top of the Wilcox sand at 6340 feet and completed at 6486 feet, flowing 7586 barrels the first six hours. Gas was gauged at 38,000,000 cubic feet. On a second gauge it produced 4914 barrels in four hours, apparently over-producing by two hours, the eight-hour gauge permitted under the regulations. Otto Bradford, field umpire, ordered the well shut in. Wilcox Oil and Gas Company is connected.

Phillips Petroleum Company's Qualls 1, SW NW NE SW Section 10-11n-3w, in the residential district of Capitol Hill, gauged 1635 barrels in three hours from a total depth of 6530 feet in Wilcox sand. This test had a relatively small amount of gas and additional work probably will be done in an attempt to increase production. Further evidence of the efficacy of setting larger casing on top of the sand, was obtained when the same operator completed its Mosey 2, SE NE NW Section 3-11n-3w. Nine-inch casing was set on top of the Wilcox sand at 6322 feet and drilling stopped at 6482 feet. During the first four hours it delivered 8636 barrels to the tanks flowing against a 500-pound back pressure with 100 pounds on the traps. Gas was estimated at 75,000,000 cubic feet. This is the fifth test of Phillips Petroleum Company to be completed with large pipe set on top of the producing formation and in each instance the well has had a higher initial production than its offsets.

Spring Rose Drilling Company et al completed their Number 1, CS½ SW NW NW Section 2-11n-3w, flowing 2081 barrels in one hour and 40 minutes. Production is coming from Wilcox sand logged at 6280 to 6370 feet.

Section 2 is the most closely drilled section in the pool, being now developed to the extent of one well to less than five acres. Being inside the townsite and divided into many irregular pieces by meanders of the North Canadian River, it has furnished some interesting data on the effect of pressure communication between offset wells. The first wells which lost circulation to each other were in this section. Jones Brothers, drilling on the Sullivan tract which was 50 by 140 feet in dimensions, lost circulation to Indian Territory Illuminating Oil Company, whose test was not more than 50 feet away at the surface. The best example was that of Rajah Incorporated's Davis 1, NW of the section. This test lost circulation after penetrating the Wilcox sand. Immediately, offset wells in three directions started producing rotary mud along with the oil. This instance seemed clearly to indicate an exceptionally loose sand condition since it could not have deviated from vertical in three directions within the one horizon.

Indian Territory Illuminating Oil Company recompleted its Number 3, CSW NE NW Section 30-11n-2w, an old producer originally completed June 13, 1930, as a 387-barrel well in Arbuckle lime at 6143 to 6648 feet. It was first plugged back to 6429 feet in an attempt to make an oil well by shutting off water. This was unsuccessful and the hole was then plugged to 5115 feet and shot with 40 quarts at 4857 to 4885 feet in the Layton Series where it gauged 60,000,000 cubic feet of gas.

Activity within the next few months probably will turn to Sections 15, 22, and 23-11n-3w, where production limits in the Wilcox horizon still are undetermined. Phillips Petroleum Company and Shell Petroleum Corporation have announced location and are digging cellar for their Egermeier 2, SW½ NW SW SW Section 23-11n-3w, north offset to their recently completed 20,000-barrel Wilcox well. Kessler Oil and Gas Company is digging cellar for its first operation, Canning 1, CE½ SE SE SE Section 22-11n-3w. These are both important sites because they are located in an undeveloped Wilcox area on the southwest flank of the structure.

Five or six wells were making final connections or waiting on cement to set on the last string of casing at the end of the past week. These should be completed during the coming 10 days.

Decker Gas Area Further Defined by North Failure

Wichita, Kans.—Rush County came into prominence again last week when Deep Rock Oil Company et al completed Koril 1, CNW Section 23-18s-16w, flowing 38,200,000 cubic feet of gas from a total depth of 3516 feet. After setting 6⅝-inch casing at 3477 feet a good showing of oil was encountered at 3487 to 3491 feet and first gas at the latter depth. It is located less than one-half mile north of the town of Shaffer in the eastern part of the county. Dewey and Mitchell's Greenwalt 1, CSW Section 17-19s-16w, which was completed as a 150-barrel pumper the last week in August, is located about six miles to the southwest. Completion of the big gas well indicates a possibility of northeast-southwest trend paralleling that of the Ellsworth Arch which has yielded several nice oil wells in western Rice and Ellsworth Counties.

Ritz-Decker-Garrett

The north limit of production in the Decker gas field was further defined when Stanolind Oil & Gas Company and Herndon encountered 2500 feet of water in Peterson 1, CSW NE Section 2-19s-2w, two 40-acre locations north of production. Viola limestone was logged from 3439 to 3445 feet and the test probably will be abandoned at the latter depth. Another development of interest was the showing of oil in Youker et al's Lagree 1, CSW NW Section 7-19s-1w, one mile east of production in the Decker pool. Chat was encountered at 2927 feet, several feet higher than expected. At 2943 feet a showing of oil was found and at 2990 to 3010 feet, still in the chat horizon, the hole was full of water. When last reported it was being drilled at 3040 feet and will be tested for Viola lime production. Geologists have tentatively correlated a sharp syncline paralleling the eastern edge of the Decker structure. Finding the chat higher than expected and the showing of oil may indicate that the syncline dies out to the north or that the Decker structure has an eastern flattening in Section 2-19s-2w and Section 7-19s-1w. Madison and Shell Petroleum Corporation in Russell Estate 1, CSW SE Section 1-19s-2w, drilled to a total depth of 3050 feet where it had a hole full of water and a showing of oil and gas. Youker et al's Lagree 1 apparently is located at about the same structural position but had the chat several feet higher. Its finding in the Viola lime will be awaited with interest as it will be the northernmost well in the area to test that horizon.

Smith-Ashe and Shell Petroleum Corporation's D. Keegi 1, NW NW NW Section 21-19s-1w, in the Canton area, logged chat from 2904 to 2940 feet and gauged 11,000,000 cubic feet of gas with the tools in the hole. So far this area has produced nothing but gas. It is quite probable that oil may be found farther down structure.

Emerick et al extended oil production approximately one-half mile west in the Decker field when Severtson 1, CNE SE SE Section 9-19s-2w, swabbed 180 barrels in 12 hours. Production is coming from the chat horizon at 2941 to 2963 feet. Foraker et al's Tinsley 1, NW NW SW Section 5-20s-1w, one mile east of the Ritz pool, topped the chat at 2951 feet and had a show of gas. Operators are preparing to drill ahead. It is one mile south of Beard and Tidal Oil Company's Day 1, which was a failure in the Viola lime and Wilcox horizons but made a small gas well when plugged back to the chat at 2935 to 2963 feet.

Magnolia Petroleum Company is shut down awaiting orders with Laughlin 1, NW NW NW Section 31-28s-1w, seven miles southwest of Wichita. A hole full of water was encountered at 3522 to 3525 feet and Viola lime logged at 3779 to 3792 feet with nothing showing. Total depth is 3792 feet.

Eastern Kansas

Flannagan et al topped chat at 2951 feet in their test located CSW Section 32-22s-1e, wildcat test slightly over a mile north of Newton in Harvey County. When only a few inches in the chat the test was making four bailers of water an hour and preparing to set eight-inch casing.

Marcus et al have announced location for Morris 1, NW NE SW Section 5-24s-12e, in the shoe-string area of eastern Greenwood County. Small production has been obtained in the southeast quarter of the section and two shallow dry holes were completed in the southwest quarter.

Kansas Wildcats

Of the 34 wildcats carried on the current drilling report, two were rigs or timbers on the ground, 13 were drilling, and 19 were shut down. Western Kansas probably offers the biggest threat of any Mid-Continent area if and when conditions warrant the further search for new production. The eastern portion of the state, under favorable conditions, would receive a number of scattered tests but nothing of great importance is expected. This is not true of the western half, which has been but little explored and which now has about 15 discovery wells scattered throughout a half dozen counties. None of these have been fully tested due to lack of transportation and storage facilities. Recent action of several purchasers in building lines to McPherson County is interpreted as the initial step in entering the areas farther west as soon as the oil situation is brighter.

New Company Takes Over Garfield County Wildcat

Tulsa.—Announcement was made during the week of the formation of St. Louis Petroleum Company with O. W. Dickerson of Oklahoma City as president. The company has taken over the interests and block of Pulse and Beamer on their White 1, SE SE NW Section 9-24n-6w, Garfield County wildcat located about two miles northwest of Kremlin and 11 miles north of Enid. The former operators have had a fishing job for the past few weeks and so far have been unsuccessful in recovering the tools which were lost at 5850 feet. St. Louis Petroleum Company will finish the job and drill for a Wilcox sand test. No reports have been made available in regard to correlation of formations already drilled. It is located about 20 miles west of the Garber pool, where Wilcox sand was encountered at approximately 4250 feet below the surface. So far all production of any consequence in Garfield, Grant and Kay Counties has been associated with well defined structures.

Ardmore, Okla.—Capitol Producing and Refining Company has started drilling and is cementing surface pipe in Cutchall 1, C SE SE NE Section 6-1n-2e, Murray County wildcat, located about 6½ miles north of the town of Davis. Tippit and Bond have the drilling contract. This operation was formerly reported under the name of Revels and Boyle. Batson, Starritt and Autry are shut down awaiting repairs on machinery at Dr. Autry 2, SW SE NE Section 27-6s-2e, Love County wildcat, about seven miles northeast of Marietta. Oil sand logged at 1623 to 1634 feet will be tested after the repair work is completed.

J. L. Dixon et al are drilling below 475 feet in McDuffy 1, SW SW SE Section 3-7s-6e, Marshall County wildcat, about four miles southeast of Kingston, where a shallow sand is producing high gravity oil. Contract depth is 800 feet.

News From California Fields

BRAD MILLS, *Staff Representative, Los Angeles, California*

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No Rush for Deep Production Found in Los Cerritos Area

Long Beach, Calif.—Completion a month ago of a good well around 8000 feet in the Los Cerritos extension at Long Beach was expected to start the usual scramble to deepen old producers and to result in many new locations, but the questionable history of the sector acted as a brake on new field work. Two new locations were made during the week and a few wells are being deepened from the 7500-foot level to the newest producing stratum. Completion last week of Ring Petroleum Corporation's No. 18 with an initial production of 1500 barrels from 7967 feet was a favorable development for such an old field, and largely influenced the increased activity during the period. Both wells completed near the 8000-foot level have produced satisfactorily, but have not been entirely free from water. The Los Cerritos sector has blossomed forth several times, only to fall flat a while later because of water encroachment. Many well which are now producing from around 7500 feet could be deepened with a minimum of time and expense. The excessive cost of drilling from the surface has checked operators who have locations available. The Los Cerritos extension was discovered some time after the main part of the field was developed, and it is doubtful whether half of the wells drilled in this section have proved profitable. This poor record makes a discovery here, which would be regarded as significant in other old fields, of questionable importance.

Playa del Rey Reduced to Only Four Drilling Tests

Los Angeles.—The decline in field operations at Playa del Rey has reduced active drilling wells to four and there is little likelihood of a revival unless an important deep zone development occurs. Union Oil Company recently abandoned Townsite 8 and 9 and does not now have an active test in the field. Herndon Oil Company has been unable to make a commercial producer of No. 3, a southwestern extension test which offsets a good flowing well. Mechanical difficulties may have been responsible for the poor showing. Possibility that the 6⅝-inch casing was cemented too high and the well is wet is admitted. The Ohio Oil Company, discoverers of the field, is drilling only one well. This company has conservatively developed its leases. Union Oil Company, which will perhaps be the largest ultimate producer, has also pursued a very conservative course of development.

Abandonment Delays Opening Of Coal Oil Point Structure

Santa Barbara, Calif.—Abandonment of Bolsa Chica Oil Corporation's Augur Permit 191-1, an important wildcat off Coal Oil Point, does not necessarily condemn this ocean structure, but the possibility of opening a new field becomes very remote with the action. This well was apparently located exactly on top of the structure, but cores taken at various levels indicated a location far down on the dip. Subsequently a revision of the geology also pointed to an edge location for the first test. This well found the Vaqueros at about 4000 feet and was drilled to 4191 feet for a production test. Bottom water appeared and the hole was plugged back to 4150 feet, but not until the best showing of the series of tests was made from the entire formation. First production was about 1000 barrels, but of this total not more than 10 per cent was oil. Mechanical changes failed to improve the status of the well. The test was shut down for a few months, to be opened by Superior Oil Company under an operating agreement. The hole was deepened to 5510 feet, but the red shale and sand offered little promise in the Sespe. The entire structure apparently lies under water, a short distance southeast of the Elwood field.

Two New Tests at Elwood Will Not Require Offsets

Santa Barbara, Calif.—Barnsdall Oil Company and Rio Grande Oil Company have made two new locations in the Elwood field, but the additional field work will not necessarily call for offsets by other operators. The new wells, Bell 19 and Bell 20, might be termed second and third line wells, with reference to the center of the field. The Elwood field has been one of the most valuable and consistent ever found in California and was rapidly developed by the discovering companies. Later the ocean tidelands were thrown open to development and production was doubled in a short time. The first wells came in with initial yields of about 5000 barrels, but it was found that by shutting in offsets and applying heavy pressures of gas, initial flows of more than 10,000 barrels were possible. The nature of the field was favorable to such practices, but the head soon disappeared and gas lifts were necessary to maintain the former flows.

Still Chance for Temblor Production at Lost Hills

Bakersfield, Calif.—The Lost Hills field still has a chance at production in the Temblor formation, despite unfavorable developments at shallower depths. The average geologist believes that none of the wells has reached a depth sufficient to pick up the objective formation. The Lost Hills field lies far out in the valley, and it is reasonable to suppose that the fill is at least as great here as at Kettleman Hills, where the Temblor formation is found on the North Dome below 6000 feet. Even at North Belridge, the Temblor is not found much above 5000 feet. Most of the wells at Lost Hills have been tested far above 5000 feet. This seems to have been equivalent to testing the brown shale at Kettleman Hills. If such proves to be the case, the objective zone may not be found short of 6500 feet. The field appears to be ideal for deeper production, judging from its position and relationship to Kettleman Hills and North Belridge, but the district is still distinctly questionable. Lincoln Petroleum Company has cored a black shale at 4896 feet in Theta 1, and is now held up with a difficult fishing job.

Kettleman Outpost Well Sets New Record on Cementing Casing

COALINGA, CALIF.—Cementing of a string of 9⅝-inch casing at 8483 feet in North American Consolidated Oil Company's Blauvelt 1, outpost test on the North Dome at Kettleman Hills, sets a new world record for this size casing and places the well in a position to become the deepest commercial producer in the world. The casing was successfully landed on bottom, but circulation could not be obtained at first. The shoe was drilled through in an effort to cement the well under pressure, but after the perforation had been made, circulation was established in the regular manner and the cementing accomplished with ordinary difficulties. Landing and cementing of this casing was one of the outstanding mechanical achievements of the year and follows the record string of 13⅜-inch which was landed in the same well at 6763 feet. About 600 sacks of cement were used. This well is now within easy striking distance of a new producing record, although it is still regarded as being in questionable territory. This part of the field was recently extended toward Blauvelt 1 by Shell Oil Company's Dixon 1, and the test stands a good chance of production in the Temblor formation.

Petroleum Securities Company is coring in very hard sand at 7775 feet in Burbank 1, important Middle Dome test which has definitely encountered the Temblor zone. Fear of finding salt water at some point near the top of the formation has been felt, but more than 200 feet has failed to develop trouble. The gas pressure has increased considerably, and a small gas well probably could be developed at this level. The cores have been burned in drilling and good cuts have been out of the question. Salt water was found near the top of the Temblor in the deepest South Dome test, and the theory that the Middle Dome represents an intermediate condition between the highly satisfactory condition on the North Dome and the South Dome. Top of the Temblor formation on edge tests on the North Dome have been shaley and did not point to the large yields obtained upon deeper drilling. Although Burbank 1 has given only a limited clue to its outcome, chances of obtaining a good production appear good. The Middle Dome will become the center of activity if a large well is completed. Standard Oil Company and other operators are awaiting the outcome of the only active test.

Bolsa Chica Oil Corporation and Superior Oil Company, now joint operators on certain leases originally held by the former, have suspended operations in Ferguson 1, an edge test on the North Dome, following an unsuccessful production test at 7704 feet. This well was recently deepened for the test and there is some doubt as to whether it has reached the Temblor zone. About 450 feet of 4¼-inch liner was landed on bottom and the well bailed down for a test. The fluid rise was enough to indicate a water condition, with no oil. This well has a rather hectic history. It was drilled to a point below 7000 feet, but the government did not allow a discovery. It was later drilled to 7690 feet and shut down for nearly a year. The structure dips sharply along the edge, and it is possible that production may be obtained by drilling deeper.

Reports have been circulated that Standard Oil Company drilled through the Temblor at 7870 feet in No. 41-3P, but there is no definite proof that the Kreyenhagen shale has been reached. The Temblor zone was found at 6385 feet, and if the deeper fossils have been found, the producing zone would be less than 1500 feet thick at this point. Shale bodies within the Temblor have proved misleading in one or two tests, and it is altogether possible that another shale streak has been found at this level. The Kreyenhagen shale was reported in a test a few weeks ago, but a more complete microscopic examination failed to support the rumor that the Temblor formation had been left. No. 41-3P is being cored ahead at 7935 feet, and it is doubtful whether an older formation has been found. This test is favorably located and should cut a maximum thickness of Temblor. Evidences of a gray oil sand were found below the doubtful shale body and the well will be drilled considerably deeper.

Miley Petroleum Corporation has made a new location near the North Dome, on the southwest quarter of Section 14-22-18. The well will be started as soon as derrick and equipment are assembled. This location is on the extreme east flank of the North Dome.

Kettleman North Dome Association will soon spud in two edge tests which will be drilled to define the limits of the North Dome. Pioneer 1 is located on the south plunge, with Milham 36-30J being the extreme north flank test.

Field work has been reduced gradually during the past two months, but there is hardly a possibility of an early complete shutdown. The present number of active tests should be maintained, and there is a good chance of a slight increase in field work.

Huntington Deep Prospects Clouded by Test Showings

Huntington Beach, Calif.—Chances for deep production at Huntington Beach are considered more remote than at any time since the first heavy gas pressure was developed last year, although there is no definite reason to predict outright failure of all wells now attempting to develop oil below 7000 feet. Superior Oil Company is coring ahead at 8200 feet in Gillette 7-2, with the formation running so tough that progress is difficult. This well is now perhaps the most important test in the field and the outcome may go a long way toward determining the activity in the lower zones. This well developed a high gas pressure just below 7000 feet, but failed to produce on a production test. It was subsequently deepened to 7490 feet and shut down for several months. Recently it was deepened to test the formation which promised to produce in W. E. McCaslin's Transport 17. Streaks of oil sand have been cut, but there is doubt whether there is enough to yield commercial production.

W. E. McCaslin has been unable to make progress in Transport 17, which has been swabbed, shot, cleaned out and swabbed again at 8365 feet. This well also cut promising oil and gas sands at various levels below 7000 feet, particularly between 8000 feet and bottom. Its failure seriously reduced the faith of some geologists in deeper production.

New Mexico and Rocky Mountain Area

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New Greasewood Dome Field's Productive Limits Unknown

Denver, Colorado.—Although definite proof has been established of a new Greasewood Dome in Weld County, northeastern Colorado, there is much left to be determined exactly about the district. Some geologists hold that Reiter Foster Oil Corporation's Ida Johnson 1, as well as the discovery well, drilled into production almost a year ago by Platte Valley Petroleum Corporation, are both on the northwestern edge of the structure; others believe it is on the southeastern edge; still a third group holds that there are two separate and distinct "highs" in the district, both of which are probably productive.

There is an added disagreement about the producing sand from which the oil is coming. The well is bottomed at 6652 feet in what some geologists call the first sand in the Dakota series, while others identify it as the Muddy. It is certain that definite identification cannot be made until a well is drilled through this horizon and a test made of the next.

Production of the two completed wells in the field fell off materially last week, with the new Reiter Foster well gauging some 400 barrels, after an initial production of around 1500, and the old Platte Valley well falling off to 160 barrels per day. This condition is attributed, in the case of the first mentioned, to the fact that it was left standing just as it came in, while tankage was erected and before tubing was run and back pressure applied. In the case of the second well it is believed that the 70 feet of open hole at bottom has been sanded up by the gas from the Reiter-Foster well channeling its way across. The gas pressure in the Reiter-Foster well has increased from 5,000,000 to 15,000,000 cubic feet per day.

At present there are three wells drilling in the field, seven are being started, and at least two more are to be drilled immediately.

Two Completions Are Near In Garland, Wyoming Area

Byron, Wyo.—More completions to the oil horizon in the Garland structure have further proved that field as an important addition to the oil producing sections of Wyoming. Two new wells are being completed at present by Portland Association, Inc., of Portland, Oregon, and by Utah Southern Oil Company. The discovery well was drilled in more than a year ago by Ohio Oil Company; it was good for 1200 barrels from 4220 feet along with 58,000,000 cubic feet open flow natural gas.

Utah Southern Oil Company's new well is bottomed at 4226 feet, and although no sustained production test has been made because of the lack of storage, it will be good for 500 to 1500 barrels per day, it is estimated, along with 25,000,000 cubic feet of gas. The well is farther north than any of the other deep completions on the structure, and materially extends the field.

Portland Association, Inc., well is bottomed at 4304 feet and is good for about 1000 barrels of black oil along with 29,000,000 feet of gas with a rock pressure of 1800 pounds. Oil production at Garland comes from the Madison lime. It is a good grade of crude but will not be produced until market conditions improve materially.

O'Neil Interests Complete Gasser North of Cut Bank

Cut Bank, Mont.—Another good gas producer was completed in the program of several wells being drilled by the O'Neil interests in the gas area north of the town of Cut Bank. The well is State 1, on 11-34-5w, and is particularly important because it is about one mile south of the hitherto proved territory and therefore adds that much more to the field.

Gas is being developed here as a supply to Montana Power Company's long gas pipe line across the state to cities and towns in Southwestern Montana. To date about 128,000,000 cubic feet of fuel is proved out of a necessary 200,000,000.

The line has been completed as far as Butte and gas has been turned into the system as far as the Dearborn River, north of Helena.

Lance Creek's Deep Test Attracts Wide Interest

Lusk, Wyo.—Another test which promises to be most interesting is the deep well which is to be drilled in the Eastern part of the Lance Creek field, Eastern Wyoming, by a company which has recently contracted for it with its owners, H. O. Emery and B. J. Erwin. This part of the field has long been favorably considered by many geologists and operators. There is one shallow producing well in this district, but no deep tests have ever been attempted. Argo Oil Company, it is understood, has agreed to furnish gas for fuel for drilling, and actual work is to be started immediately.

Kemmerer, Wyo.—Refinery belonging to Oreana Refining Company in the La Barge field, was almost entirely destroyed by a fire caused when a valve blew out recently. About 200 barrels of refined gasoline were destroyed, along with 550 barrels of crude petroleum, adjoining buildings, and the plant's big still. The refinery is to be rebuilt immediately. This is another of the many small independent refining plants springing up in Rocky Mountain territory, which dispose of their product locally.

Thermopolis, Wyo.—Announcement was made last week that the Hamilton dome field, in Hot Springs County, Northwestern Wyoming, would again be put on production after having been shut in for the last several months. The field's production is controlled by Argo Oil Company and Empire State Oil Company. It is capable of producing 1200 to 1800 barrels per day. The production will be refined at the Greybull works of Standard Oil Company (Indiana.)

East Central Texas Field Notes

H. H. KING, ***Staff Representative, Fort Worth, Texas***

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Shut-Down Restores Gas Pressure in East Texas

Tyler, Texas.—Beneficial results were sustained by various areas in the East Texas field that had been exposed to excessive oil and gas drainage in the past through the 19-day enforced production shut-down order of the governor. Restoration of pressure in wells that had declined to a low level became apparent within a week after the general shut-down, and there are many wells that were approaching the pumping stage for lack of pressure, but now show signs of making a production comeback.

Porous nature of the oil and gas horizon in the field permits rapid equalization of the pressure over a wide area. This equalization process worked to the advantage of lease owners that had made heavy withdrawals of production, while at the same time it served to lower the pressure somewhat on semi-developed virgin tracts. Owners of the leases falling within the latter two classifications will naturally be the losers through having failed to participate in the flush production while peak volume of pressure prevailed.

Withdrawal of the major portion of the militiamen on duty in the field was under way early this week, with plans to retain only 120 enlisted men and 33 officers. The troops will patrol the field, but actual supervision of proration enforcement will be in the hands of a staff of civilians paid by the state. The military will be called into service to handle proration violators when reported by these state employes.

Some of the operators are beginning to take the various orders issued by the military officers rather lightly, particularly the one requiring daily reports on production of each well for the preceding 24 hours. Only a small percentage of the operators have been charged with exceeding production allowances, and they were let off with a reprimand.

East Flank Well Failures Eliminate Potential Acreage

Tyler, Texas.—Failures drilled on the west flank of the East Texas field during the past week served to eliminate a sizeable amount of acreage heretofore considered potential oil producing area. Territory located a short distance south of Overton proved a disappointment when salt water only was encountered in the expected Woodbine horizon in Imperator Oil Corporation's J. Johnson 1, located in the southeast corner of 18-acre lease, H. B. Dance Survey. The expected production from this lease had been contracted for delivery over a long period to an independent refinery on an adjacent site. Johnson 1 cored hard dry sand at 3846-54 feet, followed by seven feet of soft dry sand, then salt water sand at 3861-65 feet. This gave the hole a total sub-sea depth of 3346 feet, or well within the established water horizon.

Phillips Brothers et al's Joe Gibson 1, located in the southeast corner of lease, T. C. Lloyd Survey, north of the railroad and about 1½ miles north of Overton, was being worked over last week after drilling sand at 3802-3809 feet. No gauge has been reported on this west side outpost test, but it is bottom at a sub-sea depth of 3329 feet, and is dangerously close to the water level. Pecan chalk was logged at 2732-3110 feet, and first Austin chalk at 3023 feet.

Salt water was reported to be showing in E. L. Chapman et al's second completion on the O. Russell 30-acre lease, J. English Survey, in southwestern part of the Kilgore area, when initial gauge was taken from sand at 3653-3655 feet. The hole was drilled to a minus depth of 3316 feet, or within the known danger zone for water. The well is credited with having gauged 65 barrels fluid per hour flowing through 9/16-inch choke, including an undetermined amount of water, which may be due to the high percentage of water showing in the first well on the property.

Houston Oil Company and Heep Oil Corporation's M. T. Cole 1, located in the J. A. Duncan Survey, and northwest part of the Kilgore area, was ordered plugged soon after testing 2700 feet of fluid, 85 per cent salt water, on 21-minute drill stem test in sand at 3591-3595 feet. This test is south of a group of wells making water with oil and gas on Cole leases owned by Sinclair Oil & Gas Company, Magnolia Petroleum Company and Harper-Neff & A. W. Phillips.

An interesting geological development was discovered by Leonard Petroleum Company and Cranfill-Reynolds Company's wildcat test in southwestern part of Rusk County and in a direct south trend of production from the East Texas field when slight traces of oil with salt water were encountered in the Woodbine sand horizon at 4047-4050 feet. Presence of spots of oil and some gravel recovered from core taken at base of the cap rock, which was logged at 4043-4047 feet, compares favorably with cores extracted from wells in the field proper, and for this reason more than usual interest was paid to the running of a drill stem test, even though the wildcat was structurally low. It was drilled in the northwest corner of the S. Tabalowski-Saenger tract, J. P. Meredith Survey, about two miles south of New Salem. Pecan chalk was logged at 2777-3218 feet, and Austin chalk at 3665-4035 feet, with a surface elevation of 306 feet. It tested 3000 feet of salt water on 15-minute drill stem test. The sub-sea depth of this wildcat is 3744 feet, while the average for the producing wells in Rusk County is above 3300 feet in minus depth. An effort is being made to induce the sponsors of this wildcat to core deeper in order to establish the thickness of the Woodbine horizon, although the salt water has blasted all hopes for making a successful completion.

Activity in East Texas Shows Substantial Gain During Week

Longview, Texas.—Field activity in East Texas comprising Gregg, Upshur, Rusk and Smith Counties registered a substantial gain in volume during the past week with a total of 98 new locations. Total operations, exclusive of tests completed but not officially tested for initial flow estimates, at the end of the week amounted to 607, including 289 tests that had begun drilling, but not necessarily active; 235 derricks and rigs; and 83 locations. Humble Oil & Refining Company is credited with about one-sixth of the total field work now under way, having reported 98 operations at the end of the week. This company had 34 tests drilling or in process of completion; 47 derricks and rigs and 17 locations. These are all on proven locations and will be on production within 30 days, with possibility of more.

Gulf Production Company and associates rank second in field

activity with 31 operations, or slightly less than one-third the volume of work carried on by the leader.

Magnolia Petroleum Company holds third place with a total of 29 operations. It is a noticeable fact that Sinclair Oil & Gas Company has been content to sit back with 80 completions and not enter the race for increased production allowances under the flat-well basis of proration. The latter has done no drilling for weeks, but will be drawn back into the play by numerous direct offsets bobbing up.

The Longview area, or that portion of the field lying north of the Sabine River covering parts of Gregg and Upshur Counties, has become the hotbed of activity, and is enjoying more development work by a wide margin than either of the two older areas. The field has a maximum width of about seven miles in the Longview area, thereby affording considerable more acreage to play upon, but it is also the most popular with purchasers of leases and royalties because of the greater pressure recorded by the producing horizon. Water has appeared in producers in the Longview area in only several instances, and that involved edge wells on the northwest flank of the structure.

Twenty Companies Earn More Than Half East Texas Output

Tyler, Texas.—Twenty major and independent companies had sufficient completions in the East Texas field when production was resumed 7 a. m. September 5 to earn slightly more than 52 per cent of the total output, which is determined on a flat daily allowance of 225 barrels per well. The field was credited with a total of 1830 wells when the ban on production was lifted, and the 10 ranking major companies accounted for a combined total of 775 producers, or slightly more than 42 per cent of the total completions. Eight of this latter group have their own trunk lines leading from the field.

Humble Oil & Refining Company, principal lease owner and operator in the field, had 223 wells on production when orders were issued by military authorities to resume production under their direct supervision, or slightly more than 12 per cent of the total completions. This company has only two wells that probably will not pump the maximum daily quota allowed. It will earn an allowance of about 50,000 barrels daily at the start, but will rapidly step this figure up to a higher level because of carrying on almost three times as much development work as any other single operator.

Gulf Production Company and associates were credited with 112 completions, all of which will make their allowable, at the start of the new proration period, while Magnolia Petroleum Company trails closely behind for third place with 106 completions, including several partnership wells.

Sinclair Oil & Gas Company's 80 completions will earn 18,000 barrels of daily production, which is far below the company's known demand for crude in this field. This company's crude purchasing department has not kept pace with other majors in lining up outside connections, although it has a number of incomplete crude contracts for fixed amounts of oil at low prices that were made some months ago which may still be honored by the producers that agreed to make deliveries. Tidal Oil Company has worked its way into fifth position in regard to number of completions, largely through having acquired a number of wells from Mid-Kansas Oil & Gas Company, and will earn 13,250 barrels daily from its 58 wells.

Operations East Texas Field

Most active companies operating in Gregg, Upshur, Rusk and Smith Counties, comprising the East Texas field, are listed below, with total completed producers held by each when production was resumed 7 a. m. September 5:

Company—	Locations	Derricks and Rigs	Active Tests	Total Underway	Total Completed Producers
Humble Oil & Ref. Co.	17	47	34	98	223
Gulf Prod. Co. et al	6	7	18	31	112
Magnolia Pet. Co.	8	6	15	29	106
Sinclair Oil & Gas Co.	..	..	..	..	80
Tidal Oil Company	1	4	5	10	58
Shell Petroleum Corp.	1	5	15	21	56
Sun Oil Company	12	7	7	26	48
Stanolind O&G Co.-Simms Oil	3	2	5	10	45
H. L. Hunt et al	1	3	4	8	39
Yount-Lee Oil Company	4	6	7	17	36
East Texas Ref. Co. et al	1	4	4	6	28
The Texas Company	2	3	8	13	25
Arkansas Fuel Oil Co. et al	..	..	4	4	22
Golding-Murchison Oil Co.	1	3	1	5	15
Atlantic Oil Prod. Co. et al	..	1	4	5	12
Harry W. Elliott et al	..	..	..	..	13
Roeser-Pendleton, Inc.	..	..	3	3	11
Pilot Oil Company	..	..	..	..	9
F-H-E Oil Company	..	..	..	..	7
Ward Oil Corp. et al	..	..	..	..	11
Total 20 cos.	57	98	131	286	956
Miscellaneous Companies	26	137	158	321	874
Total	83	235	289	607	1,830

Operations By Fields

Company—	Locations	Derricks and Rigs	Active Tests	Total Underway
Longview	33	88	112	233
Joiner	20	77	101	198
Kilgore	30	70	76	176
Grand Total	83	235	289	607

Six Major Purchasers Adopt 68-Cent Price in East Texas

Longview, Texas.—Adoption of a flat price of 68 cents per barrel for East Texas crude by six more of the leading purchasers during the past week makes the quotation introduced on August 22 by Magnolia Petroleum Company almost unanimous, as most of the independent buyers and local refiners have been forced to elevate their offers to a corresponding level in order to line up new connections. Except possibly on isolated leases, there is now a ready market for all oil produced at the above figure, which is on a par with similar grade of Mid-Continent oil. This favorable turn in the market has not restored confidence to operators generally, as there is widespread belief that some of the leading companies that are openly opposed to the current proration plan will shortly begin neglecting their outside connections and then reduce the price posting as a means of forcing a change in the method of proration. Evasive terms used by two major purchasers in meeting the 68-cent price added weight to this feeling of uncertainty.

Sun Oil Company was the first to officially follow Magnolia Petroleum Company with a 68-cent price, having posted same August 24. Tidal Refining Company fell in line September 2, and on the following day both Gulf Pipe Line Company and Sinclair Refining Company officially endorsed the same schedule.

The Texas Company announced that effective 7 a. m. September 5 that it would pay for East Texas crude "the prevailing price on the date oil is run," and at the same time made it clear that the company still has no posted price in this field. Failure of the company to come forward with a concise statement as to what it would pay has

left many producers in doubt, although it is assumed that the price will be 68 cents. On the other hand there are many properties in the field that are contracted to deliver allowable production to local refineries on a profit sharing price basis that will net less than the top posting, and others are obligated to complete incomplete contracts made with majors and independents at prices ranging from 25 to 10 cents per barrel.

Humble Oil & Refining Company advised royalty interests and its outside connections in the East Texas field by letter dated August 27 that crude run between August 1 and 17 would be settled for at 15 cents per barrel, and 25 cents per barrel from the latter date to 7 a. m. August 22, while a price of 68 cents per barrel would apply from August 22 to the date of the letter. It is assumed that the company will continue to settle for crude at the higher price schedule, and representatives of the company's crude purchasing department have been soliciting outside connections on such a basis. However, the company does not officially post any price in the field, and may elect to pay on a different price basis when September runs are settled for.

Shell Petroleum Corporation and Atlantic Oil Producing Company invariably use Humble Oil & Refining Company's crude prices in settling for royalty and outside purchases in Texas when the latter's prices are available, and can be counted upon as a payer of the 68-cent price in East Texas, although neither has officially announced the price.

East Texas independent refiners and other buyers for tank car movement are finding it difficult to continue in the market for this crude, which is now generally quoted at more than four times the average price paid by the group prior to the military invasion and suspension of production of the field. Only a few of the East Texas refiners have sizeable contracts for the sale of their fuel oil at a reasonable price, and those without this protection are forced to take from five to 15 cents per barrel for their high cold test fuel oil. These plants are recovering an average of 15 to 17 gallons of U. S. motor gasoline from a barrel of crude, and this product is the principal source of revenue with an average price of only about four cents per gallon. Pipe line tariffs and deductions on crude along with the general plant overhead leaves little opportunity for the East Texas skimming plants to pay the top posted and survive unless some success is met with in bolstering the fuel oil price.

Inflation of Royalty And Lease Values Anticipated

Longview, Texas.—Inflation of values on leases and royalty interest in the East Texas field proper is expected to take place now that crude price offers of all major buyers have been placed on a par with Mid-Continent best grade, or 68 cents per barrel. Another favorable development is the resumption of orderly production under the guidance of military rule, including a forced accounting of all oil run from day to day, thus enabling many royalty owners for the first time to learn about withdrawals from an unquestionable source. Most purchasers of leases and royalty interests in the past have calculated potential returns on investments on 25-cent oil, with a few estimating an average price for the recoverable crude at 50 cents per barrel. Deals made on such a price basis will have a better chance of eventually showing a good profit under the new price and production schedule, although prolonged over a greater period.

Operators generally are skeptical of the new prices and orderly production continuing over a long period, and for this reason have refrained from stepping up lease and royalty prices to any appreciable extent. The upward trend will be slow, but steady if the state continues to show good faith in curbing the output of the field in a systematic manner, while such a program would automatically take care of the price situation.

Lease transactions consummated within the past 10 days convey an idea as to how the price trend is running. A. R. McElreath and F. W. Suggett, Fort Worth brokers, sold their lease on the east 100-acres of the O. M. Victory tract, E. A. J. Evans survey, Upshur County, to Conservative Oil Company for $350 per acre cash and $1500 per acre payable from three-eights of the first oil. This lease is proven, but close to the northwest edge of the field. Several miles to the northeast of the above property, Arcadia Refining Company has taken over Verne Dumas Petroleum Company's A. O. Phillips 25.2-acre lease, Sarah Harrell survey, at 2000 feet, by assuming a $12,000 obligation. The latter lease also has a $50,000 oil payment due from three-eighths of the first oil.

Margay Oil Corporation, Tulsa, is adding to its lease reserve in Gregg County through occasional purchases. This concern is credited with having purchased from O. O. Alford et al the lease on the L. M. Colburn 35.7-acre tract, Henry Hathaway survey, for $1500 per acre cash, and Gamble and others' lease on the Tom Christian 25-acre tract, G. W. Hooper survey, for $1275 per acre cash.

Cranfill-Reynolds Company, Houston, sold its Mollie Fenn 28-acre lease, H. H. Edwards survey, located several miles northeast of Gladewater, to Texota Corporation, with one completed well that gauged 160 barrels first 15 minutes through open tubing, for $58,000 cash. Texota Corporation was organized early in August by Mark T. Wilson of Longview and associates with a capital stock of 750 shares of no par value, and the initial test was the drilling of a well on the M. Fenn 11-acre lease, David Ferguson survey, Gregg County.

East Texas Proration Office Located at Henderson, Texas

Henderson, Texas.—General offices of the East Texas proration enforcement staff has been located here in the Kangerga building, with A. B. Capers, who formerly was umpire for the Longview section of the field, and more-recently chief umpire for West Texas in charge of proration details. Omar H. Burkett, former deputy supervisor of the oil and gas division in the Cisco district, has been appointed chief supervisor for the East Texas field. Deputy supervisors assigned to the East Texas area by the commission, include W. P. Laughter, who was transferred from San Antonio; Luther Swift, who formerly saw service as a deputy supervisor at San Angelo; V. E. Cottingham, San Angelo; and E. W. Barr, Electra. The latter two were new appointments.

R. C. Bowles, San Antonio, was added to the staff as petroleum engineer, and L. A. Millhallon, Midland, is to be chief clerk. R. E. King, Tyler, will serve as clerk, and A. E. Amos, Fort Worth, checker. Well gaugers are to include the following: Horace Camp and Paxton Gray, Austin; George Phillips and Howard M. Van Zandt, Fort Worth; W. R. Tandy, Abilene; J. N. Parineau, Houston; Grady Russell, Stephenville; Clinton Kendall, San Antonio; B. D. Byrne, Austin; Paul Phillips, Dalhart; Luther Ballew, Decatur; A. D. Brinkerhoff, Waco; M. N. Shelton, Walnut Springs; B. B. Bickerstaff, Dallas; and H. W. McCurley, Beaumont.

EAST TEXAS HIGHLIGHTS

By H. H. KING
Staff Representative

Only 13 Violate Order

Thirteen violators of the East Texas order have been reported to the commission so far, and officials of that body expressed satisfaction that there were no more considering the sudden decision to open the field and the unprepared condition of operators over the four counties.

R. D. Parker, chief supervisor of oil and gas, was inclined to view these violations leniently, and stated September 7, that he expected corrections to be made within two or three days. He hopes to enforce the order of the rail board without penalizing any of the operators in the field, and feels that this can be done efficiently by the end of the present week.

Martial Enforcement to Be Tested

A court attack against the continuation of martial law enforcement in the East Texas oil field as a preliminary move for the launching of a test case of the Texas Railroad Commission's latest proration order for the field is proposed by a group of independent operators with holdings in the area. Progress had been made by the Dallas members of the group early this week in raising $15,000 to be paid in the form of a retainer to a law firm at Austin that has been somewhat successful in the past in attacking proration orders of the commission. A Dallas concern with scattered producing oil interests in the Joiner section of the field has been tentatively selected to make the test case of the martial law jurisdiction.

Price Terms Being Adjusted

Adjustments of price terms on unexpired crude contracts in the East Texas field were being made during the past week by many purchasers in order to assure deliveries without resorting to legal force. Producers that obligated themselves to deliver fixed quantities of oil at the recent low price levels without providing for exceptions in the event of proration interference in their sales contracts are sparring with buyers for reasonable relief. Incomplete contracted deliveries made when prices ranged from 20 to 10 cents per barrel with wells flowing open are threatening to wipe out such property owners if contracts are enforced with only 225 barrels daily allowed per well. Some contracts are being cancelled by mutual consent, while others are compromising by letting the contracted price apply on half of the daily deliveries, and the posted price of the field apply to the other half. A contract for 500,000 barrels of oil sold at a flat price of 10 cents per barrel to a local refinery was settled on the latter basis, with the plant owner eager to make such terms in order to be assured of a steady crude supply.

Atlantic Line Progressing

Atlantic Pipe Line Company had completed 107 miles of its 10-inch trunk line, extending from East Texas to tanker terminals at Atreco, near Beaumont, a distance of 181½ miles, at the close of last week, and expects to have the line in operation before close of the month. Construction crews are now averaging four miles daily in welding the pipe. This is the last scheduled trunk line for the East Texas field remaining to be completed, except for Texas-Empire Pipe Line Company's 12-inch carrier, which will probably be completed about one week ahead of the above line.

Cash Funds Advanced

Advancing of cash funds to reliable independent operators in the East Texas field for use in developing leases is becoming common practice among some of the major companies, who obtain a fixed quantity of crude to be delivered as produced from such leases at less than posted prices. Some major companies are being awarded the right to run all oil produced at posted price over a long period, or in some instances for the life of the property in return for making such loans, with payments on the cash advance made from one-fourth of the first oil produced. These cash advances are secured by a mortgage on the property.

Refiners Pass Up Stored Oil

East Texas refinery owners failed to avail themselves of the opportunity to purchase the sizeable quantities of storage oil held by independents during the enforced production shut-down period, and suspended operations at their plants sooner than would have been necessary. The fact that the asking price for this storage oil was much greater than what the plant owners were used to paying served to curb the latter's interest in the supply. Magnolia Petroleum Company purchased about 250,000 barrels of storage oil from Woodley Petroleum Company and about 100,000 barrels from Sabine Oil & Pipe Line Company (Southern Oil Refining Company), paying its posted price of 68 cents per barrel. Sun Oil Company bought 280,000 barrels from Cranfill-Reynolds Company on the second day after the shut-down, paying 25 cents per barrel, which was the highest posting at that time.

Legislature May Reconsider Appointive Commission Plan

Fort Worth.—Revival of a recent short-lived movement to have state jurisdiction over oil and gas matters placed in the hands of an appointive commission composed of experienced oil men was launched here over the week-end when it became known that the legislature would convene in a special session September 8 to deal primarily with the cotton problem. An unsuccessful effort was waged by a group of proration leaders of the state when the legislature was last in session to have the Texas Railroad Commission relieved of oil and gas conservation enforcement. Governor R. S. Sterling has endorsed the idea of creating a special oil and gas commission, and it is believed that he will request the legislature to pass such a law before the law making body adjourns.

Legislature May Consider Additional Tax On Crude

Austin, Texas.—Calling of a special session to consider a cut in cotton acreage by Governor Sterling has brought up the question of an increased oil tax. It is known that the governor favors a two-cent a barrel tax on crude, and it is believed that this proposal will be received more favorably at this session after the cigarette tax has been in operation and the amount of revenue therefrom is more accurately known.

While a further tax on the oil producer at this time is considered damaging to the industry, other industries including agriculture, appear to be in such a plight that further tax on them is out of the question. Too, the first proceeds of the natural gas tax will be received during September while the legislature is in session on the cotton bill. Should this tax fail to bring in expected income, a larger production tax undoubtedly will be proposed and it is thought generally that it will have an excellent chance of passage as an effort to save the farmer.

South Texas Field Developments

EARL POST, ***Staff Representative, San Antonio, Texas***

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Southwest Texas' Deepest Test Is Finally Abandoned

San Antonio, Texas.—Finis was spelled for the deepest well ever drilled in Southwest Texas when Humble Oil & Refining Company's Kohler 50, Duval County, was closed down August 31. The well was dry and abandoned at depth of 7725 feet. The well is located 2805 feet from the south line and 160 feet from the west line of Survey 164 in the Kohler pool. It was cored practically all of the way down and was a tremendously interesting project.

Duval County scored two new operations during the week, both in the southwest extension of the Schoolfield and O'Byrne pool. Duval Oil Corporation's Bishop Duval Land Land Company 4 has been spudded. It is 1650 feet from the west line and 330 feet from the south line of the north one-half of Survey 135. Magnolia Petroleum Company's Wilson 4, 1520 feet from the west line and 800 feet from the north line of Survey 134, is rigging up.

John F. Camp and Stanolind Oil & Gas Company's Hubbard 2, BS&F Survey, 3½ miles south and east of the Schoolfield and O'Byrne pool, Duval County, is drilling at 750 feet after setting 40 feet of surface casing. This is the second well drilled on a large block, the first being abandoned at 2626 feet.

Duval County is having a rather extensive wildcatting campaign, however, none of the wildcats have reported anything interesting to date.

Another Producing Horizon Opened in Mt. Lucas Field

San Antonio, Texas.—Another producing horizon, the deepest commercial stratum in the Mt. Lucas field, has been opened by Gulf Coast Oil Company's Harrell 1, flowing 185 barrels daily from 4553-62 feet. The well is located 330 feet from the south and west lines of the tract, Block 32, Section 311, GC&SF Survey.

When the well was spudded in April last year, it was a wildcat, about three-fourths mile north of the producing area, but drilling beyond this test to the north and west brought it into proven territory before it was finally completed nearly five months later.

This well was unusually interesting, opening several sands and extending others. At 3154-68 feet, it showed 750 pounds pressure in 1½ minutes on a 3/16-inch choke. At 3761-75, it tested 175 test of oil and 750 feet of mud. In both cases, it undoubtedly could have made a producer. At 4087 feet, 6⅝-inch casing was set over a sand to 4095 feet. While attempting to complete the well, it blew out and caught fire, destroying the rig. The test finally was shut in and a new rig moved from another location to complete the well. At first, it produced 150 barrels daily, but the gas pressure began to increase. It was then killed and swabbed in the second time, showing 1500 pounds pressure and only 30 barrels of oil.

Not satisfied with the production, the well was drilled deeper, testing numerous sands. At 5225 feet, the well was stopped and plugged back to 4562 feet to test a sand topped at 4553 feet. The well was then completed for 75 barrels, but showed plenty of gas. The well was killed and tubing pulled. A one-half inch choke was installed on the bottom of the hole and the well again completed, making 185 barrels of oil and no water, indicating the best producer in the field. There are producers at various depths from below 2000 feet to 4300 feet, but this well is the first to find commercial oil below that depth.

Gulf Coast Oil Company has two other wells in the field. The Sagarin 1 is rigging up, while the Elder 1, three locations northwest of the Harrell is drilling at 2634 feet in hard sand and lime.

Neal Milton and Kepley Production Company's Roark, 2000 feet northwest of the Saxet's Dunn 8, a 4300-foot producer, is drilling at 3127 feet in hard lime. Saxet Oil Company's McCampbell 1, also in the Saxet field, is preparing to spud in.

Six miles south of the Agua Dulce field in Nueces County, Stanolind Oil & Gas Company is preparing to complete its Charles E. Stratton 1, which recently tested 200 pounds pressure in five minutes at 4746 to 4752 feet. All preparations have been made and the plug is being drilled. The well is in Section 12 of the Stratton subdivision, P. Anchow Survey.

Additional Tests of Extension Pool at Pettus, Appear Likely

San Antonio, Texas.—The immediate drilling of two wells in the southwest extension pool of the Pettus field, Bee County, seems likely as T. B. Slick estate moves in equipment for the drilling of Ray 1. The Ray 1, 330 feet from the west line and 150 feet from the south line of the George A. Ray 159.36-acre tract in the George A. Kerr Survey, is a direct offset to Dalmac Oil Corporation's Ray 1, completed late in July as a 700-barrel producer from 3920-25 feet.

The Ray producer has been shut in to about 100 barrels daily since its completion, but the drilling of the Slick well likely wil cause Houston Oil Company to drill another offset in this pool.

This area is one mile southwest of the Pettus townsite and is generally considered to have opened an entirely new pool in the Pettus field.

In the Cosden pool, west of the field, Cosden Oil Company is working over its McKinney 3, which is in the regular sand.

Just north and east of the discovery pool at Pettus, United Production Company's Ray 39, T. Hanson Survey, is waiting on cement after setting casing at 4506 feet; total depth is 4530 feet. This is to be a deep test.

Two wildcats are getting under way in Bee County. J. C. Hughes et al's P. H. Martin 1, 900 feet south of Simms Oil Company's Holzmark 1, gasser, is preparing to rig up. The well is in the John Lyford Survey. The other test is Humble Oil & Refining Company's Laura Thompson 1, 6361 feet from the north line and 15,094 feet from the west line of the L. D. Thompson 25,597-acre tract in the Garrett Roche Survey. It is about three miles southwest of Hulbert et al's Mrs. Denver Chestnut 1, Miguel de los Santos Survey, which was abandoned last year below 5000 feet. The test is now rigging and should be spudded within the next few days.

Refugio District Continues To Be Comparatively Active

San Antonio, Texas.—Working over wells, drilling or plugging them from one sand to another and similar projects keep Refugio field a comparatively active district.

Mission Drilling Company's O'Brien 1, a former producer at 6449 feet, has been drilled to depth of 6685 feet, plugged back to 6405 feet and will be shot in an attempt to make a gasser. The sand is at 6394-6405 feet.

Moody-Seagraves Producing Company's City 9 is a completion, but the gauge is not available. The well is a work-over in the deep horizon. It came in with plenty of pressure as soon as it was swabbed down to about 1900 feet. The same company has derrick up on its Strauch 1 on Block 8, and will work it over. The O'Conner 4, same operator, being deepened from 5456 feet, has a sand at 6454-56 feet and is reaming down to set liner.

United Production Company is the only other active operator in the field. This company made location for its W. J. Fox 2-A, 1600 feet north of the Fox 1-A, an 892-barrel well in the 5800-foot horizon, and is rigging up. On the Fox B lease, this company's Fox 1-B has increased its flow to 1029 barrels through a one-fourth inch choke. The well was completed a few weeks ago at 5865-72 feet for an initial of 808 barrels. The company is drilling its M. F. Lambert 4 at 5685 feet and is due to hit the pay shortly. The company is waiting on orders on O'Brien 6, total depth 6451 feet.

Activity in Shallow Fields Of Zapata County Is Resumed

San Antonio, Texas.—Resumption of activity in the shallow fields of Zapata County since the rise in crude prices was especially noticed during the past week when four new locations were reported. They were: E. K. Bateman's M. Garza Estate 1, Block 29, Los Comitas Grant, south extension of the Muckelroy pool; F. H. Etheridge's Henne-Winch 1, Survey 286, northeast of Bustamante; O. W. Killam's Cuellar 44-B, Survey 277, Cuellar pool; Trevino Oil Corporation's Trevino 10, Block 15, Survey 412, Muckelroy pool.

Humble Makes Location For Test In Guadalupe County

San Antonio, Texas.—Humble Oil & Refining Company has made location for its Sue E. Denman 1-C, 300 feet due east of John F. Camp's Sue Denman 1, wildcat producer, Guadalupe County. The well is preparing to spud in.

The exact location is 450 feet from the south line (Highway) and 150 feet from the west line of the tract in the William Arrington Survey and one mile southwest of nearest production in the Darst Creek field.

At last reports, the Denman well was continuing its allowed flow of 924 barrels daily, based on a potential of 6072 barrels through a four-inch valve, half closed. The well topped Edwards lime at 2495 feet after faulting all the formations out between the base of the Taylor and the Edwards. The test was sunk to a depth of 2507 feet. Its actions and position relative to the Darst Creek field has caused the oil and gas division of the Texas Railroad Commission to plan to place the well in a separate new unit for proration purposes. The new pool is known as the Camp pool. The well is being temporarily carried in the Darst Creek proration unit.

It is not likely that there will be any great amount of drilling in the new district in as much as Humble Oil & Refining Company controls the entire acreage surrounding the new producer with the exception of the 50 acres on which the well is located. The Texas Company, Magnolia Petroleum Company, Sun Oil Company, Gulf Production Company and Camp, however, hold some interesting wildcat stuff in the vicinity.

W. P. Laughter, proration umpire for the Darst Creek district, has issued proration schedule No. 29 for September. It shows a potential production of 126,482 barrels, allowing .152247 per cent of the aggregate of 20,000 barrels daily. The only producer of the month was Camp's Denman. The last report for August showed a potential of 126,699 barrels. Report follows:

Company—	No. Wells	Total Potential	Daily Allowable
Abercrombie & Harrison	5	3,074	468
John F. Camp	1	6,072	924
Cranfill & Reynolds	1	85	85
Empire Gas & Fuel Company	8	1,685	337
Gulf Production Company	52	26,778	4,141
Humble Oil & Refining Company	48	22,987	3,499
Louisiana Oil Refining Corporation	17	8,791	1,421
Magnolia Petroleum Company	48	11,538	1,878
Penn Oil Company	1	45	45
Stroube & Stroube	1	95	95
Sun Oil Company	15	13,344	2,044
Texas, Humble et al	1	634	97
The Texas Company	53	30,527	4,647
L. C. Turman	2	.....	....
Trinity Drillers	3	647	139
H. H. Weinert et al	1	95	95
H. H. Weinert	1	30	30
H. H. Weinert	1	55	55
Field total	259	126,482	20,000

Large Gas Well Completed In Carolina-Texas Field

San Antonio, Texas. — Southern Gas Utilities and E. A. Sterling and Company (Henne, Winch and Killam) have completed de la Garza 1 for an initial production of 60,000,000 cubic feet of gas from the sand at 2560-70 feet. It is on Block 12, Survey 336 of the Carolina-Texas field, Webb County.

Several new locations were reported in the county during the week. They follow: French Oil Corporation's Benavides 4, Cole field, Survey 659; O. W. Killam's Bruni 2, Cole district, Survey 9, Mariano Arispe Grant; Winfield Killam's Killam 1, Cole district, Block 18, Survey 1618; Magnolia Petroleum Company's Benavides 5-A, Cole district, Survey 660.

Test In Welder Gas Area Coring Before Completion

San Antonio, Texas.—Welder Oil Company's Welder 2, in the Welder gas district, San Patricio County, tested 1000 pounds pressure in four minutes open with no water from a sand topped at 3648 feet and drilled to 3654 feet. The well is coring deeper before completing.

The test is located 150 feet east of the center of the west line of the 100-acre tract.

Three and one-half miles south of the gasser, Jacob, Buzzini and Pickett are reaming at 3309 feet in their Baldwin 2, T. Amarro Survey.

San Antonio, Texas.—Stanolind Oil & Gas Company and John F. Camp will start drilling immediately their Pettus 2, about 2000 feet northwest of Pettus 1, Goliad County. The well will test out the horizon found in the first well at 4282-86 feet, which showed 15 barrels of oil, 30 barrels of water and about 10,000,000 cubic feet of gas daily.

Gulf Coast Field Developments

JACK LOGAN, ***Staff Representative, Houston, Texas***

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Abandon Well in Hankamer District, Liberty County

Houston.—Gulf Production Company's Boyt 14 in the Hankamer district of Liberty County was abandoned this week below 6000 feet after logging two oil shows.

Boyt 14, located 500 feet west of Boyt 13 in the H. & T. C. Railroad Survey No. 22, had been closely watched since the middle of June, when it logged the first oil show at 3968 feet. A second show was reported in sand and shale at 4490 feet.

Following the second show, the well was drilled to slightly below 6000 feet, when it was decided to plug back and test the upper sands. The old hole was successfully sidetracked a little above 3963 and the oil show encountered at 3968 feet tested. A few days after the well tested salt water at this depth, it was abandoned.

A second wildcat abandonment for Liberty County this week was Tucker et al's Bell 1, located in the Devers district, 2100 feet south of the north line and 650 feet west of the east line of the 187-acre N. Bell tract in Section 4 of the H. & T. C. Survey. Bell 1 was abandoned slightly below 3085 feet after having been shut down for several weeks at that depth.

Houston.—Persistent efforts of Cullen and West, successful Gulf Coast operators, to develop commercial production east of the old Nash dome in Brazoria met another setback this week when they were forced to abandon Nash 1 in sandy shale slightly below 5470 feet. Nash 1 is located about three miles east of the dome.

Southwestern Nueces County Well Promises New Gas Field

San Antonio, Texas.—Stanolind Oil & Gas Company's Charles Stratton 1, wildcat test in the extreme southwest part of Nueces County, gave promise early this week that it would come in as a large gas well, opening a new field.

After drilling of plugs and setting of liner and screen, the well began raising mud while drill pipe was being removed and tried to blow out. It was killed by pumping in baroid. Tubing was being run in the test on Tuesday, September 8, and it was scheduled to be swabbed in on the following day.

The sand was encountered at 4746 feet and cored to 4752 feet, where a drill stem test developed a pressure of 200 pounds in less than five minutes, no water showing on the test.

The well is about six miles south and a little west of the Agua Dulce field, being in Section 12, Stratton Subdivision, P. Anchow Survey. The producing horizon in the Agua Dulce field is at an average depth of 2000 feet, and Houston Oil Company has two wells about one mile east of that field yielding gas and a little oil from depth of 4900 feet.

New Gulf Coast Oil Field In Prospect in Brazoria County

Houston.—There is a strong possibility as this goes to press that The Texas Company will usher in a new field in the Texas Gulf Coast early this week as a result of revelations of its Brazoria County wildcat test.

The Texas Company's Belcher 1, located southeast of the town of Manvel, 157 feet southeast of the northwest line and 220 feet northeast of the southwest line of Lot 18, Block A, Suburban Gardens Division, cemented last week 9⅝ inch casing at 5463 feet after having topped a rich sand at a little below that depth.

A subsequent drill stem test of the sand showed better than 5000 feet of oil in the drill stem in less than five minutes. The oil tested 28 gravity, pipe line grade. According to advices received in Houston, plans of the operators were to bring the test in during the night of September 8.

Barbers Hill Production Increased by Five Wells

Houston.—Daily average output of oil at Barbers Hill, which has gradually declined during the past few months from about 30,000 to 19,300 barrels per day, is expected to show a healthy increase during September as the result of addition of better than 5000 barrels initial production during the week ending September 5.

The Texas Company's Winfree 6 was completed during the week for 3000 barrels initial production at 4509 feet. McAlbert Oil Company, another Barbers Hill operator, completed its Anne Higgins 2-A for an initial yield of 500 barrels at 5200 feet. Sun Oil Company, developing part of the John H. Smith property, completed John H. Smith 2 for 270 barrels of flush oil; while Sinclair Oil and Gas Company, also developing part of the Smith property, completed John H. Smith 3 for an initial production of 1600 barrels, with a pressure of 340 pounds.

These completions, with the exception of The Texas Company well, represent gradual development work in the field proper and are not identified with the activity on the east flank of the field recently precipitated by discovery of a shallow production horizon in that sector by The Texas Company.

Houston.—W. R. Alexander et al are rigging up a wildcat well in the R. A. Hanks Survey of Harris County which should spud by the latter part of September. The test, to be known as Herman Hale 1, is located 1058 varas east of the southwest corner of the Littlefield Survey along the north line of the Hanks Survey, thence south 790 varas thence south 74 degrees and 26 minutes, west 70 varas.

Houston.—Two wildcat wells were abandoned in Hardin County during the week ending September 5: D. O. Speights' Guidrey 1, located four miles south of Batson, was abandoned at 4320 feet, after having hung up the drill stem at that depth; Plummer and McDaniels' T. S. Reid 1 was abandoned at 1325 feet.

Louisiana--Arkansas Field Notes

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Start Sixth Test for Upper Trinity in Rhodesa Gas Area

Shreveport—Location was made during the last week for the sixth test of the upper Trinity gas field at Rodessa, northwest Caddo Parish, when United Gas Public Service Company announced H. J. Bussa 1, 990 feet south and 660 feet west of NEC Section 33-23-16. Five gassers, all high in gasoline content, have been added in the 5500-5600 zone of the upper Trinity in that area.

United Gas Public Service Company which recently started a test for the anhydrite zone of the Glen Rose which finds gas from 4300 and 4350 feet, was trying to set a string of 12½-inch casing during the last week at 1500 feet in Treadwell and Hawks 1, SE NW Section 6-19-5W, Claiborne Parish, about 15 miles southeast of the Homer oil field. Four gassers are already producing from this formation in oolitic limestone. Each makes about forty million cubic feet of gas daily and the gasoline content runs a little over one gallon per thousand cubic feet of gas.

It has often been said that structures cannot be found in these soft surface formations because the beds give no reliable readings, but this structure was mapped and named by H. D. Easton, Shreveport geologist, in February, 1919, before Homer had a commercial oil well and without any subsurface information within many miles. The first test there by Homaokla Oil Company in NE NE Section 6-19-5w, McBride 1, was drilled to 3000 feet and abandoned. Subsequently Triangle Drilling Company discovered the gas in the Glen Rose and have four commercial wells.

Shreveport, La.—W. M. Coates and Associates' Collins 1, SW NW NE Section 28-9-10, Natchitoches Parish, which has been shut down for several months, was abandoned during the last week as a salt water hole at 4091 feet in sandy lime. This test created much interest last spring when after passing through hard lime at 4039 feet the bit dropped several feet and subsequently a sand core was secured which showed considerable oil. This was thought to be Woodbine and was hailed as a possible discovery of the Woodbine sand production on the southeast flank of the Sabine Uplift. However, the test was subsequently drilled to 4091 feet where it tested 15 fourbles of mud and salt water. Formation where abandonment was made was identified by some paleontologists as Fredericksburg. Whether salt water came from the Blossom or near bottom of the hole was not determined. No casing had been set after Blossom was encountered. Midway chalk was topped 2612 feet.

Shreveport, La.—Four new locations were announced in North Louisiana during the last week, two being for the general area between the original Blue Lake (West Zwolle) field and the recently opened mile southwest extension of the Zwolle townlot producing area. These two locations are W. M. Coates' Stille 1, NW SE Section 35-8-13, and G. M. LeGrand's Peterson 1, SW NE Section 34-7-13.

Louisiana Petroleum Company and Hudson and Bird during the past week took 800 acres of leases centering in Section 26-8-11, in the northeast part of the Zwolle field and plan to drill several tests, one of which must be spudded by October 10.

Besides a new location in Rodessa and the two in Zwolle, Southern Carbon Company made location for Pollard 1, Section 26-16-6E, Richland Parish gas field. One gasser was completed in the Richland gas field, United Carbon Company's Faust Brothers Lumber Company 1, Section 13-17-5E, which gauged 22,392,000 cubic feet of gas at 2430 feet in shale. Rock pressure was 850 pounds.

Arkansas Deep Test Making Slow Progress at 5200 Feet

Shreveport, La.—Lion Oil Refining Company and associates drilling Guy P. Hayes A-9, NE NE Section 4-16-15, Union County, Smackover's first really deep test, made slow progress again during the last week. Late in the week a straight hole tester was being run at 5236 feet.

One new location was made in Arkansas during the last week, this being W. H. Copenhaver and associates' Berg 1, SE SE Section 13-15-17, Ouachita County, not far from the Mount Holly field in that county where a few small producers were completed early in 1929. Ten-inch casing was set in the new test at 42 feet.

Make Geophysical Surveys In Eastern Mississippi

Jackson, Miss.—Considerable geophysical work is being done in Noxubee and Winston Counties, in East Central Mississippi, by Torsion Balance Exploration Company of Houston. It is reported here the work is being done for Adams Royalty Company on cut-over land owned by Sumter Lumber Company as a basis of potential mineral value of the property. It is reported several large lumber companies in East Central Mississippi and Western Alabama contemplate similar work with the same idea in view. One test is now drilling in Winston County and one in Noxubee County.

Geophysical Research Corporation of Houston has had a party working in various parts of Mississippi recently. One area worked was a block in Sharkey and Humphreys Counties, in the Mississippi delta, which The Texas Company took over several months ago from J. P. Evans, Shreveport independent operator. It is known that some similar work was done on tracts under lease to Arkansas Natural gas Corporation and Humble Oil & Refining Company in Southwest Mississippi in Wilkinson and Adams Counties. The work extended across the Mississippi River into Concordia Parish, Louisiana.

Jackson, Miss.—Two new locations were announced for the Jackson gas field during the last week, both being on the Hinds County side of the field. Jackson Oil and Gas Company is rigging up for Mayes 3, NE NW Section 2-5-1e. This test is 565 feet west and 285 feet north of the same company's Mayes 1 in the same section, completed early in 1930 as the discovery well of the Jackson gas field. F. E. Stewart and associates are building derrick for Mississippi

Cotton Seed Products 1, Section 4-5-1e, western edge test for the field.

Five tests are actively drilling in the Rankin County side of the field.

Under terms of the lease, Pocahontas Natural Gas Company, a subsidiary of Missouri-Kansas Pipe Line Company, must spud a test by September 27 on a block a few miles south of Vicksburg in Warren County. The test will be to 4000 feet. Location has not yet been announced.

Begin Construction of Gas Line to Serve Hattiesburg

Jackson, Miss.—Maunder Construction Company of Dallas, Texas, recently awarded contract for the natural gas distribution system at Hattiesburg, 90 miles south of Jackson, has begun construction work on the project and hopes to complete the work by November 1. Considerable pipe has been strung along the right of way between Jackson and Hattiesburg for the eight-inch gas line to be built by Public Service Corporation of Mississippi, which has the Hattiesburg gas franchise. All the right of way is cleared, and engineering work completed.

Meanwhile unconfirmed reports are heard here that United Gas System of Houston, are negotiating with Public Service Corporation for purchase of this entire firm, the Hattiesburg gas franchise, and the pipe line right of way. United's gas line from Pickens near Jackson to Mobile, Alabama, and Pensacola, Florida, which was purchased from Southern Natural Gas Company, with laterals to Gulfport, Mississippi, Bogalusa, Louisiana, and other points in St. Tammany and Washington Parishes, in Louisiana, passes near Hattiesburg.

It is understood that of the 15 million to 16 million cubic feet pulled daily from the Jackson field, approximately 11 million cubic feet is being furnished to Bogalusa and nearby points. A number of points have been haggling over rates and requirements that their gas be on a basis of 1000 B.t.u., which requirements Monroe and Richland, Louisiana, gas meet while the Jackson gas, according to some tests is from 922 to 965 B.t.u. This accounts for the fact, it is said, that Southern Natural Gas Company is buying Louisiana gas instead of from Jackson for its southeastern consumers.

Nothing Favorable Shown by Los Angeles Basin Wildcats

Los Angeles.—Los Angeles Basin wildcats showed little change during the week, with unfavorable developments predominating. York-Smullin Oil Company abandoned Watson 1, an extension test east of the Torrance field, at 4744 feet. This well produced some oil at various levels, but fell short of a commercial producer. Another test may be drilled a short distance east of the abandoned well.

Yellowstone Oil Corporation drilled Huntington 1, a shallow test near Alhambra, to 2901 feet and suspended operations. The few wells drilled in this immediate district have logged oil showings at various levels. In line with the old shallow Los Angeles field, the area probably owes its streaks of oil sands to this relationship.

Mesmer City Realty Company will drill a second test on Section 27-2-15, near the Playa del Rey field. The original well location on Section 24-2-15, will be abandoned at 6635 feet.

Nuoil Company's Gessell 2 was tested on the pump at 1835 feet, but this Newport Beach wildcat failed to produce satisfactorily and will be deepened for a more extensive test of the shallow zones. Drilling will be stopped short of 2700 feet.

Eastern Nacogdoches County Scene of Three Wildcat Tests

Houston.—Three wildcat tests are due to spud in the eastern section of Nacogdoches County during the coming week. They are Hyater, Whited and Mast's G. L. Muckelroy 1; Big Indian Oil Company's J. N. Stewart 1; and, Foreman et al's Mattauer 1.

Muckelroy 1 is located 3000 feet west and 6700 feet south of the northeast corner of the Jose Flores Heirs Survey. J. N. Stewart 1 is in the Black Jack community. Mattauer 1 is 550 feet from the north and 770 feet from the west line of the Robert E. Mattauer 100-acre tract in the Chireno Survey.

Ginter et al were to have tested recently a 12-foot stratum of oil sand reported in their Neil Wells 1, 15 miles southeast of Nacogdoches in the M. H. Chireno Survey. An unsuccessful attempt at setting casing at 3050 in the well has delayed the test.

Abandon Two Wildcat Tests in Milam County

Houston.—Abandonment this week of wildcat tests in Milam County by Del-Tex Oil Corporation and Wilson-Brock respectively, left only one active wildcat in the area: Red Bank Oil Company's J. A. Foster 1, which is fishing at 4685 feet.

Del-Tex Oil Corporation abandoned its W. D. Dulbeck 1 in shell at 2430 feet. The test is located 450 feet from the east and north lines of the Dulbeck 137-acre tract in the Rodriguez Survey. Wilson Brock's E. L. White 1, located 250 feet each way out of the southeast corner of the E. L. White 75-acre tract in the Samuel Frost Survey, was abandoned slightly below 3754 feet in the Glenrose lime. This latter test had the Georgetown lime at 2900 feet.

Red Bank Oil Company's J. A. Foster 1 continues to hold interest of scouts regardless of mechanical accidents which have retarded its progress downward. The well had the Austin chalk at 4410-4575 feet and then twisted off the drill stem in Eagleford shale at 4693 feet: A gas show was recorded at 2183-96 feet.

Houston.—Two new wildcat test locations, one of which has already rigged up and spudded, were announced this week for Montgomery County. G. W. Strake has spudded in on South Texas Development Company 1, 2½ miles southeast of Conroe. The well is located in the Theodore Slade Survey. Humble Oil & Refining Company has staked location for W. A. Renn 1, four miles south of Magnolia, 700 feet south of the north line and 900 feet west of the east line of the Renn 286-acre tract in the S. J. McFarland Survey.

Casper, Wyo.—The oil well on Teapot Dome of Wind River Oil & Gas Company of Greensburg, Indiana, which was completed several months ago, has been put on production recently and is now reported good for 20 barrels per day from the shale at 1950 feet. The well is on the west side of the field.

Casper, Wyo.—Interesting deep wildcat test on Nieber Dome which is being drilled by Ohio Oil Company is now bottomed in what is believed to be the top of the second Frontier sand at 7325 feet; a string of seven-inch casing is set and cemented at 7260 feet. The first Frontier sand showed some gas, but not in commercial quantities. Nieber Dome is in Washakie County, North Central Wyoming.

INTERNATIONAL PETROLEUM
IN REVIEW

ROY E. LEIGH, *Foreign Editor, New York*

Digboi Field, Upper Assam.

Dutch Colonial Output Reduced

New York City.—Latest reports from the East Indies indicate a drastic reduction in output from the Dutch colonial oil fields. The monthly average output approximates 2,800,000 barrels during 1931, as compared to an average of 3,226,854 barrels during the year 1930.

Thus it appears that Sir Henri Deterding and associates meant what they said in the last annual report of Royal Dutch Company when they foretold a reduction of two-thirds in operating expenses of Bataafsche Petroleum Maatschappij, colonial producing subsidiary.

Mexican Hindsight Better Than Foresight

Mexico City, Mexico.—A controversy between Aaron Saenz, Secretary Industry, Commerce, and Labor in the cabinet of President Rubio, and Luis N. Morones, head of the Mexican Confederation of Labor and Secretary of Industry, Commerce, and Labor in the cabinet of former President Calles, recently brought forth an interesting statement by Sr. Saenz, who charges Sr. Morones with responsibility for the ruination of the oil industry in Mexico.

"I am also convinced," said Saenz, "that unjust arbitrary application of the (petroleum) law on the part of Morones provoked, through the exodus of petroleum companies from Mexico, the ruin of this national industry and provided one of the causes of the prevailing economic depression in the country. The damage caused by Morones is permanent, for his policy determined the development of the oil fields of Venezuela, Colombia, and other countries, which because of geographical and economic reasons now constitute prime factors in the competition against Mexican petroleum."

Colon Production Shows Decrease

Maracaibo, Venezuela.—Production of Colon Development Company, Ltd., Royal Dutch-Shell subsidiary operating in the Colon District, south of Maracaibo Lake, Venezuela, averaged 20,912 barrels per day during the week ended August 21, as compared to a daily average of 20,711 barrels during the week ended August 14.

Gulf Party Surveying Barco Concession

Bogata, Colombia.—Howard Quinlan, formerly of the managerial staff of Venezuela Gulf Oil Company, at Maracaibo, is at the head of a party of engineers and geologists who are investigating the Barco Concession, in Colombia, on behalf of Compania Colombiana del Petroleo, controlled by Gulf Oil Corporation.

The engineering section of the party is headed by Harry Tscheppe and the geological section by L. A. Luecke, formerly of the technical staff of Venezuela Gulf Oil Company, of Maracaibo.

The entire party consists of about 75 men, including eight Americans and three Colombian engineers and geologists.

The recent compromise agreement, which became effective on June 25, 1931, provides that drilling must be commenced within two years from that date, with a second rig to be placed in operation within six months, these rigs to be kept continuously employed until a settled production of 20,000 barrels per day has been developed or until the company is satisfied that such production cannot be found.

The company has the right to select 50,000 hectares (about 125,000 acres) within five years from the effective date of the contract, plus 150,000 hectares (approximately

375,000 acres) within 10 years, making a total of approximately 500,000 acres included in the revised concession.

This party is said to be devoting its first attention to the eastern part of the concession area, adjoining the producing properties controlled by Colon Development Company, Ltd., per concession from the Venezuelan government. An important anticlinal structure is said to traverse the international boundary at this point.

This contract is not subject to the drastic terms of the new Colombian petroleum law, which became effective September 1.

Pure Oil Wildcatting In Venezuela Maracaibo, Venezuela.—Orinoco Oil Company, subsidiary of Pure Oil Company, is drilling below 3530 feet in its Netick Well No. 2, northwest of Maracaibo.

Thuringian Production Increases Berlin, Germany.—A substantial increase in daily average production from the Volkenroda well of the Burbach Potash Works, in Thuringia, is reported. This well, output from which now averages around 525 barrels daily, has precipitated a small leasing campaign and has also served to introduce the subject of oil into the politics of the province.

A bill now before the Thuringian state legislature provides that the production of petroleum shall be made a state prerogative; but local observers predict its failure on account of the lack of financing.

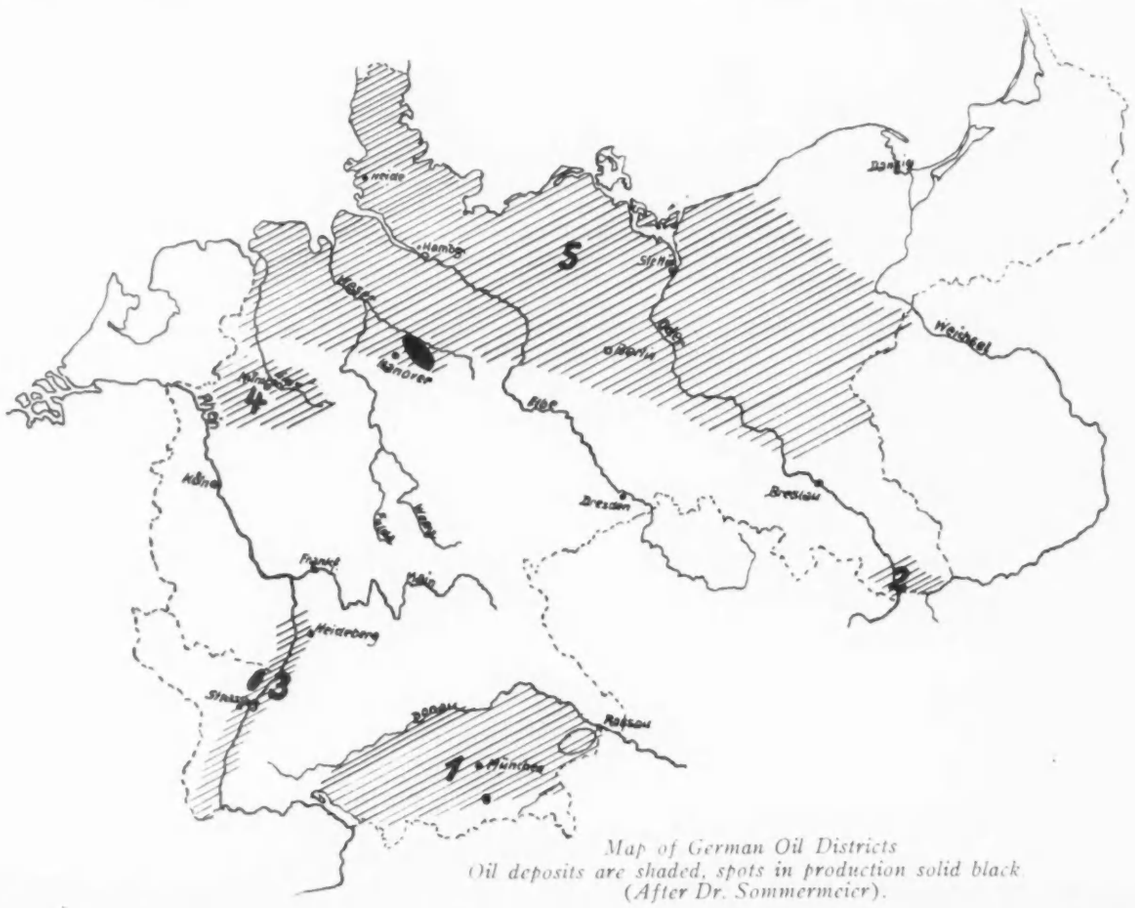
"Petroleum in Roumania", Revised Edition New York City.—The 1931 revised edition of "Le Petrole en Roumanie," by Mihail Pizanty, Editor in Chief of "Moniteur du Petrole Roumain," of Bucarest, is being distributed.

This general survey of the oil industry of Roumania and of the world is published from time to time in the Roumanian, French, German, and English languages. The current edition is written in French, the latest English edition having been published last year.

Statistics published in this volume impress one anew with the growing importance of Roumania in the oil industry of Europe. Production has been increasing steadily since the World War; and in 1930 Roumania took rank as the fifth oil producing nation of the world, her output having been exceeded only by that of the United States, Russia, Venezuela, and Persia.

A graphic chart prepared by Mr. Pizanty shows that Roumanian oil reaches every market in Europe, excepting only Russia, from which all foreign oil is barred, and that it also is a factor in the markets of the Near East and of northern Africa.

This masterly analysis of the oil situation from the Roumanian point of view is most comprehensive in its scope in that it treats of statistics, economics, and legislation in addition to improvements and advancements in the fields of production and refining.



Map of German Oil Districts
Oil deposits are shaded, spots in production solid black.
(After Dr. Sommermeier).

Completions for Past Week in U. S. Fields

▼ ▼ ▼

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
CAPITAN—		
General Pet. Corp., Erburu 10	100	3112
LONG BEACH—		
Ring Pet. Corp., Zenith-Miley 18	1500	7967
Republic Pet. Co., Macrate-Severns 1	100	7550
Shell Oil Co., Jones 12	25	6900

EASTERN STATES

NEW YORK

WAYNE FIELD—		
Burns Oil & Gas Co., Clover 1	¶3½	....
ELMIRA FIELD—		
Glen Dearth, Turner 1	¶½	3362

WEST VIRGINIA

WOOD COUNTY—		
Love Brothers Oil Co., Love 1	*	....
RITCHIE COUNTY—		
Mountain Iron Supply Co., Exline 1	3	....
MINGO COUNTY—		
United Fuel Gas Co., Central Trust 4326	¶½	1616
Midway Gas Co., Brewer 1	¶1	1467
CALHOUN COUNTY—		
Creed Barker & Co., Holbert 2	¶¼	2085
C. B. Lewis & Co., Hobler 1	¶¼	2080

SOUTHEASTERN OHIO

NOBLE COUNTY—		
Evert Berbacher, Calland 2	1	1305
MORGAN COUNTY—		
Commonwealth Gas Corp., Newton 12	¶¼	1453
Commonwealth Gas Corp., Newton 12	¼	1453
WASHINGTON COUNTY—		
Wickens & Co., McIntyre & Perdew, 3	*	....

CENTRAL OHIO

ATHENS COUNTY—		
Waley & Baughman, Chesapeak & Ohio Railroad 1	¶½	3340
BELMONT COUNTY—		
Purdy, Peters & Co., Lyne 1	¶¼	1915
HOCKING COUNTY—		
Ohio Fuel Gas Co., Unger 1	¶½	2527
MEDINA COUNTY—		
Edson Co., Frank 25	*	480
Edson Co., Packard 17	20	393
MEIGS COUNTY—		
Ohio Fuel Gas Co., Carr 3	¶1¼	977
STARK COUNTY—		
Medford Oil & Gas Co., Easterday 2	¶¼	4367
Wittmer Oil & Gas Co., Myers 1	¶¼	3932
Ohio Fuel Gas Co., Stockert 1	¶1½	....
WAYNE COUNTY—		
Bryan & Co., Alexander 4	*	752

NORTHWESTERN OHIO

HENRY COUNTY—		
Lake Shore & Southwestern Metal Co., Hockman 1	¶½	....
LUCAS COUNTY—		
Lake Shore & Southwestern Metal Co., Oberly 1	¶½	....
SANDUSKY COUNTY—		
C. W. Sapp, Miller 1	¶¼	....
SENECA COUNTY—		
McKinney Bros., Martin 1	¶¼	....
J. H. Murphy & Co., Grimes 1	¶¼	....
WOOD COUNTY—		
George L. Haubert & Co., Smith 6	10	....

MICHIGAN

ISABELLA COUNTY—		
Talbot Oil Co., Woods 1	2500	3770
MUSKEGON COUNTY—		
W. E. Lang, Jonio 1	*	2250
H. & W. Feiche, Feicke 1	*	2700

KENTUCKY

HART COUNTY—		
Pearson Petroleum Co., Sego 1	¶1½	520

NORTH LOUISIANA

RICHLAND PARISH—		
United Carbon Co., Faust Bros. Lbr. Co. 1, 13-17-5e	¶22¼	2430

For Tabulation and Comparison See Market Section

TEXAS

CENTRAL EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
JOINER FIELD—		
Golding-Murchison Oil Co.-Shell Pet. Corp., R. W. Fair (100-ac) 1	7000	3625
Gulf Prod. Co., W. L. Murphy (79.6-ac) 4	6000	3743
Humble O&R Co., A. D. Blackwell (80-ac) 5	6800	3654
A. D. Blackwell (80-ac) 7	4500	3651
C. O. Crim (40-ac) 1	7400	3786
E. S. Holt (30-ac) 1	7400	3775
Ida Holt 2-B	7200	3793
W. B. Key (42.78-ac) 4	7500	3772
J. H. Silvey (100-ac) 4	9000	3774
C. J. Thompson (116-ac) 4	7000	3698
M. C. Thompson 1	10,000	3613
A. L. Walker (124-ac) 2	4000	3656
J. H. Wooley (200-ac) 5	4400	3668
H. L. Hunt et al, R. W. Fair (55-ac) 1-D	7500	3643
Imperator Oil Corp., J. Johnson (18-ac) 1	*	3865
Lion Oil Ref. Co., H. Brooks 5	1800	3730
Stanolind O&G Co., D. W. O'Quinn 4	5000	3815
The Texas Co., J. W. Wilson (134-ac) 3	9000	3676
Ward O1 Corp. et al, E. S. Thrash (70-ac) 3	6500	3812
KILGORE FIELD—		
J. G. Beard et al, Muckelroy 1	7500	3627
E. L. Chapman et al, O. Russell (30-ac) 2	7500	3655
Clark-Kinnebrew-Simpson, P. R. Register (7-ac) 1	12,000	3700
Cranfill-Renyolds Co., Grif Favis (20-ac) 1	8000	3571
Delaney & J. B. Stoddard, D. Smith (25-ac) 1	13,000	3636
East Texas Ref. Co., E. Sample 1	6600	3726
Gladewater Oil Co. (Livingston) Johnson 1	9000	3616
Golding-Murchison Oil Co., Sally Smith 1	8600	3676
Gulf Prod. Co., Wm. Jernigan (100-ac) 8	8000	3728
Houston Oil Co.-Heep Oil Co., M. T. Cole 1	*	3595
Humble O&R Co., C. E. Christian (277.65-ac) 4	8200	3703
L. D. Crim 564-ac) 38	9000	3643
L. D. Crim (248-ac) 42	8500	3593
Lewis Prod. Co.-Selby O&G Co., Tom Bean (46-ac) 1	4500	3623
Leonard Pet. Co., Corbin 1	10,000	3594
Magnolia Pet. Co., V. H. Barton (17.87) 1	8400	3713
Jessie King (33-ac) 4	8000	3699
Pelton Pet. Co., C. O. Christian (10-ac) 1	9000	3754
Shell Pet. Corp., J. Douglas (89.3-ac) 3-A	11,000	3622
J. H. Spivey (88-ac) 2	10,000	3730
A. H. Tarver et al, J. W. Free (28-ac) 1	10,000	3684
Tidal Oil Co., J. M. Blackman 6	9500	3650
Strong 1	12,000	3681
LONGVIEW FIELD—		
Abernathy-A. B. Kilpatrick, L. A. Rodden (2½-ac) 1	8400	3624
Cox & Jake Hamon, Jr., L. A. Rodden (105-ac) 1	8500	3578
East Texas Ref. Co., Luella White 1	15,000	3563
S. P. Lanier & Collins, E. W. Clements (20-ac) 1	9600	3580
Magnolia Pet. Co., O. F. Smith (97-ac) 2	12,000	3570
Mudge Oil Co., J. F. Bland (32½-ac) 1	1500	3755
Stanolind O&G Co.-Simms Oil Co., American Trust Co. (72-ac) 1	6000	3505
Yount-Lee Oil Co., J. C. McKinley 2-C	9000	3599
Thrasher-Stuckey 3	11,000	3557

WEST TEXAS

WARD COUNTY—		
Beckley et al, M. L. Johnson 1	25	2240
Shipley Oil Corp., Hayzlett 5	30	2520

TEXAS GULF COAST

BARBERS HILL—		
McAlbert Oil Co., Anne Higgins 2-A	500	5200
Sinclair Oil & Gas Co., Jno. H. Smith 3	1600	5400
Sun O1 Co., Jno. H. Smith 2	270	5425
The Texas Co., Winfree 6	3000	4500
DAMON MOUND—		
D. C. Wellack, J. Hammon 1	*	690
HULL—		
Sun Co., Carr 8	*	2080
MARKHAM—		
Ike Laughlin et al, Gray 1	250	3260

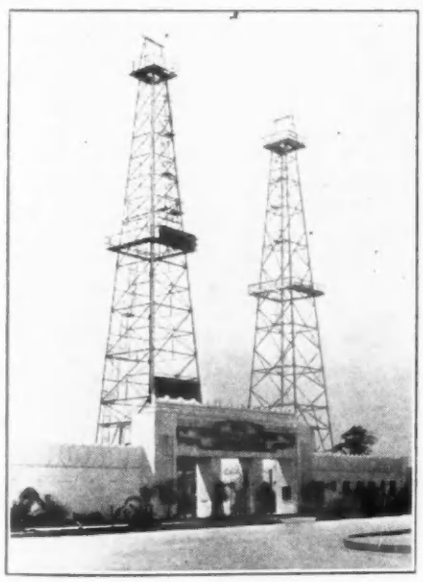
SOUTH TEXAS

BEXAR COUNTY—		
Ingersoll & Miller's E. B. Carruth 2	*	620
DUVAL COUNTY—		
S. J. Carpenter's Benavides 1	*	1725
Coffee et al's Jose Garza 1	*	1920
Humble O&R Co.'s Kohler 30	*	7725
MEDINA COUNTY—		
J. H. Hickey's Jungman 1	*	563
Sunflower Oil Co.'s Mofield 1	*	2040
NUECES COUNTY (Saxet)—		
Gulf Coast Oil Co.'s Harrell 1	185	4562
WEBB COUNTY—		
Southern Gas Utilities, E. A. Sterling & Co.'s Garza 1	¶10	2570
WILLIAMSON COUNTY—		
H. Fritz et al's Fee 1	*	930
ZAPATA COUNTY—		
McCauldin, Owen & Newton's Garza 1	*	1847

OKLAHOMA

CARTER COUNTY—		
Frank Gwin et al, Burton 1, c s½ sw 30-1s-2w	130	2218
Carter Oil Co., Franklin 4, ne c 24-1s-3w	2330	1859
CREEK COUNTY—		
Hollifield et al, Johns 1a, se c sw se 4-17-10e	¶2½	1083
Abbott, Dean et al, Schuler 1, cel w½ nw 1-19-8e	*	2868
KAY COUNTY—		
Summitt Drlg. Co. et al, Hays 1, nw ne nw 24-28-3e	*	3677
MUSKOGEE COUNTY—		
Western Devel. and Elec., Dills 1, sw c 4-15-18e	10	975
J. E. Rose, Howard 12, sw c ne ne ne 30-15-16e	¶¾	158
OKLAHOMA COUNTY—		
Skelly Oil, Spencer 1, ne c nw se 15-11-3w, 5 hrs.	8185	6388
Phillips Pet. Co., Leverish 1, csl se sw 10-11-3w, 4½ hrs.	5165	6330
Wilcox & Marshall, Martin 1, csl sw nw nw 10-11-3w, 4 hrs.	2465	6380
Phillips Pet. Co., Clift 1, sw c nw nw ne 3-11-3w, 4 hrs.	8395	6301
OSAGE COUNTY—		
Petroleum Drlg. Co., 18, (owd) ne c nw nw 25-26-8e	¶.6	1182
The Texas Co., 9, cnl s½ nw, 36-23-10e	*	2183
Oklahoma Nat. Gas, 1838, nw c sw 25-21-11e	*	1742
Oklahoma Power & Water, 132, nw c ne 18-21-9e	*	2572

Company, Well and Location	Initial Production Bbls.	Depth
L. G. Stanley et al, 4, sw nw ne 14-21-8e	*	2386
Oklahoma Power & Water, 131, sw c se, 23-20-10e	*	2556
PAWNEE COUNTY—		
Sikes et al, Copeland 4, nw se sw 26-20-9e	15	2096
Clyde Ramsey, Dickinson 1, se sw nw 1-20-8e	5	936
John Wilson et al, Eaton 1, nw sw sw 19-20-10e	*	2100
Cimarron Oil, Smelzer 3, sw c nw nw 29-20-9e	*	2410
T. E. Harris, McCollum 1, se nw nw 14-20-9e	*	962
J. L. Essley et al, school land 1, sw ne sw 13-20-9e	*	2440
Stanley Brewer, Kilpatrick 1, ne se ne 19-20-7e	*	2984
M. B. Jensen, Tate 2, cel nw 9-20-9e	*	703
TEXAS COUNTY—		
Cimarron Utilities Co., Safranke 1, c se 1-3n-14e c m	¶22	2685
WAGONER COUNTY—		
Brasheers et al, Watson 1, se c sw ne 31-18-17e	*	1070
KANSAS		
CHASE COUNTY—		
Kline et al, Koegeoboehn 1, c ne nw 28-19-6e	*	567
COWLEY COUNTY—		
Dunlop et al, Smith 1, ne nw sw 7-33-5e	¶.15	605
McPHERSON COUNTY—		
Lario O&G and Shell, Suffield 3, ne c se 25-19-2w	1190	3411
Ritz O&G and Shell, Neufeldt 1, sw c nw 15-21-3w	110	3080
MORRIS COUNTY—		
Loomis et al, Munsell 3, se nw se 15-16-7e	¶.1	412
RICE COUNTY—		
Allison & Fitzwilliams, Blake 1, ne c nw 9-18-10w	*	3319



Los Angeles.—With the permanent Oil Equipment and Engineering Exposition receiving increased attention from foreign visitors, plans are being laid to make the Third Annual Exposition, which will be held in Los Angeles from February 1 to 7, 1932, a more extensive show than the two preceding annual expositions. Every phase of the petroleum industry will be represented and equipment and materials for drilling, production, pipe line, refining, natural gas and marketing will be displayed.

Manufacturers of oil tools and machinery have been developing and perfecting equipment to meet the more exacting conditions that will result with a return to more normal conditions. The exposition will give them the opportunity to show these latest designs to the oil men in all branches of the industry.

One of the derricks now erected at the exposition discloses some unusual features in design and is the only one of its type yet erected. Other tools with distinctive features are also installed and are receiving constant study by the many visitors who attend the exhibit daily.

In order to facilitate the work of the program committees of the various technical societies, schedules are already being made for engineering meetings. More demonstration work will also be planned for the 1932 show. The United States Bureau of Mines has advised that its plans are now made for both an exhibit and a demonstration, and that valuable data and assistance will be made available to the operator at the exposition.

Just Off the Press

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American Petroleum Institute.

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KETTLEMAN HILLS—Miley Pet. Corp., Maddox 1, 14-22-18.

MT. POSO—T. A. Piper, Glide 1, 15-27.28.

PLAYA DEL REY—Sam B. Herndon Oil Co., No. 4, 28-2-15.

SAN DIEGO COUNTY — Oklahoma Oil Corp., No. 1, 25-11-8.

KANSAS

BUTLER COUNTY—Flint Hill O&G, Martin "B" 1, ne c sw 27-28-4e.

FINNEY COUNTY—National Refining Co., Watkins 1, c sw, 13-23-30w.

McPHERSON COUNTY—Lario O&G and Shell, Sellers 1 (cwd), sw c ne 31-19-1w; Reserve Oil and Shell, Ritz 2, sw c 31-19-1w.

RENO COUNTY—Palmer, Phillips et al, Goering 1, nw c se 1-23-4w (owd).

STEVENS COUNTY—McKnab et al, Hallack 1, c sw 36-33-39w.

OKLAHOMA

CREEK COUNTY—Roy Dean et al, Boyd 1, cwl e½ nw 30-19-9e.

MUSKOGEE COUNTY—R. B. Hask et al, Grayson 1, nw c se 35-16-15e.

MURRAY COUNTY — Capitol P&R, Cutchall 1, se c ne 6-1n-2e.

OKLAHOMA COUNTY—Octate Oil, Smith 3, se c ne se nw 15-11-3w; Ocate Oil, Smith 2, se c ne nw 15-11-3w; Kessler O&G, Canning 1, cel se se se 22-11-3w.

OKMULGEE COUNTY—W. B. Pine, Shepart 4 (owd) nw c 29-12-14e.

OSAGE COUNTY—W. H. Twyman 2, se c nw nw se 32-22-8e; Okla. Power & Water, 133, nw c ne 26-21-9e; Okla. Nat. Gas, 1839, nw c se sw nw, 26-21-11e.

PITTSBURG COUNTY—J. E. Weible, Smith 1, se c ne nw se 5-8.16e.

WAGONER COUNTY—E. Mills et al, Porter 1, nw c ne nw ne 7-15-17e.

TEXAS

ARCHER COUNTY—Shappell Oil Co., Wichita Falls, J. M. Hawley, 160, 1, S. P. Ry. sur, nw corner. Wotola Royalty Corp., Wichita Falls, J. W. Lester, 60, 1, 2451 TE&L sur, 670 ft from w and 790 ft from s line.

BASTROP COUNTY — M. Schimmell & Batts, San Antonio, J. E. Ferguson, 100, 1, Jas. Doyle sur, 1600 ft from se and 160 ft from ne lines; 2, 2175 ft from se and 150 ft from sw line; R. E. Trigg, 1400, 3, Jas. Stewart sur, 2775 ft from se and 175 ft from sw line; J. C. Williams, 100, 1, Jas. Doyle sur, 2000 ft from se and 150 ft from ne line; 2, 1000 ft from se and 150 ft from sw line.

BEE COUNTY—Humble Oil & Ref. Co., Houston, L. D. Thompson, 1, G. Roach sur, 6381 ft from n and 15,094 ft from w li survey.

BEXAR COUNTY—Ewell Neill, San Antonio, J. Watson, 250, 1, B. Martinez sur, 580 ft from w and 1700 ft from s line.

CALLAHAN COUNTY—Greathouse & Russell, Baird, W. A. Ramsey, 100, 4, 2.82 TE&L sur, 300 ft ne of No. 2.

DUVAL COUNTY—Humble Oil & Ref. Co., Houston, P. E. White, 640, 1, Sec. 58 sur, 330 ft from s and 1650 ft from w li sec. Corrected location. Camp & Stanolind O.l & Gas Co., San Antonio, M. C. Hubbard, 640, 2, S 73, BS&F sur, 330 ft from n and 660 ft from w li of sec.

GREGG COUNTY—Alma Pet. Co., Oklahoma City, Okla., C. B. Cox, 10, 1, H. R. Hokit sur, 150 ft from n and w lines; C. W. Stokes, 8, 1, H. R. Hokit sur, 150 ft from n and e lines. Humble Oil & Ref. Co., Houston, M. Killingswerth, 177, 1, H. Hathaway sur, 391 ft from n and 200 ft from e line; J. A. Knowles, 100, 7, M. Van Winkle sur, 238 ft from n and 200 ft from e line. Cox & Hamon, Ardmore, Okla., Fee, 73, 1, Jno. Ruddle sur, 350 ft from s and e lines. Golding & Murchison Oil Co., Dallas, S. Smith, 2, 5, 1, M. Scott sur, 319 ft from n and 330 ft from w line; L. P. Griffith, 82, 1, M. Van Winkle sur, 222 ft from n and 220 ft from w line; 2, 300 ft from n and 240 ft from e line. Stanolind Oil & Gas Co., Longview, Cox & Hamon, 72, 1, Jno. Ruddle sur, 250 ft from s and w lines. Hamill & Smith, Houston, D. Meyers, 40, 2, C. Rhode sur, 330 ft from n and 440 ft from w line. Gulf Prod. Co., Houston, M. T. Cole, 160, 2, J. Meador sur, 330 ft from n and w lines. H. P. Key, Tyler, J. A. King, 5, 2, W. H. Chisum sur, 150 ft from n and e lines. Pet. Finance Corp. & Shasta Oil Co., Longview, Laird & Crim, 25, 1, L. B. Outlaw sur, 235 ft from s and 933 ft from w line. Deep Rock Oil Corp., Tulsa, Okla., A. Tooke, 44, 1, W. G. Painter sur, 318 ft from e and 270 ft from s line. J. E. Stack, Shreveport, La., Doby, 2½, 2, Castleberry sur, 200 ft from e and 150 ft from s line. Arkansas Fuel Oil Co., Shreveport, C. Brown, 100, 1, Wm. McCurry sur, 300 ft from n and 330 ft from e line; M. Christian, 19, 1, H. Hathaway sur, 318 ft from w and 300 ft from s line Sigler & McCall, Nocona, M. Young, 50, 2, C. Rhodes sur,230 ft from n and 300 ft from e line. A. B. C. D. Oil Synd., Brenham, J. L. McNeeley, 17, 2, W. M. Chisum sur, 155 ft from n and e lines; 3, 979 ft from n and 160 ft from e line. Corrected location. Badgett & Falvey, Longview, J. W. Falvey, 58, 2, M. Irwin sur, 250 ft from s and w lines. Columbia Oil & Gas Co., Longview, J. G. McGrede, 41, 1, D. Sanchez sur, 314 ft from e and 450 ft from s line. Roy Davis, Tyler, Gladewater, 2, 1, Ferguson sur, 210 ft from n and 109 ft from e line. Vacuum Oil Co., Houston, H. B. Zeigler, 2, P. McAnulty sur, 150 ft from n and 220 ft from e line. C. H. Brown, Longview, D. G. Spark, 30, 1, H. H. Kirk sur, 291 ft from n and 208 ft from w line. Tidal Oil Co., Fort Worth, T. Bell, 95, 1, Penn sur, 200 ft from n and 554 ft from w line. Barnsdall Oil Co., Tulsa, Okla., J. G. McGrede, 109, 6, D. Sanchez sur, 782 ft from n and 285 ft from w line. East Texas Refg. Co., Dallas, T. Tuttle, 55, 1, Wm. Castleberry sur, 450 ft from e and 600 ft from s line; P. C. Castleberry, 40, 1, G. W. Hooper sur, 328 ft from n and 400 ft from w line; W. J. Hineman, 52, 2, G. W. Hooper sur, 324 ft from e and 330 ft from s line. Magnolia Pet. Co., Dallas, L. E. Orms, 16, 1, Wm. Castleberry sur, 265 ft from e and 495 ft from s line.

GUADALUPE COUNTY — Jno. F. Camp, San Antonio, S. E. Denman, 50, 1, Wm. Arrington sur, 450 ft from s and 150 ft from e line.

HARRIS COUNTY — W. R. Alexander, Houston, L. Hahn, 152, 1, (Wharton County), H. Hale, 500, 1, R. A. Hanks sur, 700 vs from n and 70 vs. from e line.

HUTCHINSON COUNTY—Pennowa Oil & Gas Co., Skiatook, Okla., Smith, 82, 4, S 7, B Y, M&C sur, nw cor of nw¼ of ne¼.

McLENNAN COUNTY — J. W. Smith, Bruceville, W. F. Wills, 50, 1, Dallas & Early sur, 156 ft from n and 450 ft from e line.

MEDINA COUNTY — Medina Oil & Ref. Co., Hondo, R. J. Taylor, 150, 2, S 135, Bruchet sur, 1700 ft from n and 1050 ft from e line.

NUECES COUNTY—Saxet Gas Co., Houston, W. B. McCampbell, 144, 1, H. L. Kinney sur, 1990 ft from n and 600 ft from w line. Kepley Prod. Co., Laredo, N. J. Roark, 106, 1, 250 ft from s and e lines.

RUSK COUNTY—Humble Oil & Ref. Co., Houston, W. A. Millikin, 166, 3, T. J. Martin sur, 764 ft from n and 300 ft from w line; O. R. Holt, 60, 2, S. P. Hollingsworth sur, 712 ft from n and 200 ft from e line; L. DeGuerin, 12, 1, T. J. Martin sur, center; M. Kangera, 125, B2, J. B. Cadena sur, 300 ft from w and 346 ft from s line; C. A. Brightwell, 1, 45, 1, T. J. Martin sur, 430 from w and 300 ft from s line; H. A. Piercy, 90, 2, T. J. Martin sur, 326 ft from n and e lines; M. D. Caldwell, 73, 2, T. J. Martin sur, 326 ft from s and e lines; A. D. Blackwell, 82, 9, E. Cordova sur, 1150 ft from n and 250 ft from w line; J. D. Florey, 89, 1, T. J. Martin sur, 326 ft from s and w lines; I. Holt, 64, 4, Geo. Berry sur, 325 ft from s and 1801 ft from e line; M. Kangera, 116, A15, M. J. Pru sur, 300 ft from w and 277 ft from s line; M. Kangera, 90, A16, M. J. Pru sur, 300 ft from w and 323 ft from n line; C. E. Christian, 277, 5, W. W. Simms sur, 330 ft from w and 1150 ft from s line; 6, 330 ft from w and 1950 ft from s line; J. R. Box, 125, 3, T. J. Martin sur, 326 ft from n and w lines; D. Thomas, 59, 5, M. Van Winkle sur, 164 ft from ne and 617 ft from se line; J. E. Wheelis, 160, 6, F. Cordova sur, 475 ft w of center of e line. J. S. Rushing, El Dorado, Ark., G. Thompson, 10, 2, R. E. Winn sur, 219 ft from e and 152 ft from s line. Darst Oil Co., Seguin, M. B. King, 34, 1, M. McCabe sur, 330 ft from n and w lines; 2, 330 ft from s and w lines. British American Oil Pro. Co., Tulsa, Okla., Mayfield 45, 1, J. B. Cadena sur, 250 ft from n and e lines. R. B. Bryant, Dallas, F. J. Cox, 10, 1, R. H. Penney sur, 300 ft from e and 150 ft from n line. Fox-Wood, Oklahoma City, Okla., L. Morse 5, 1, R. Smith sur, 200 ft from w and 150 ft from s line. K. & P. Oil Co., Tyler, M. Brock, 12, 2, R. W. Smith sur, 150 ft from s and w lines. Sun Oil Co., Dallas, H. Schuler, 50, 2, J. B. Cadena sur, 300 ft from e and 327 ft from s line; R. G. Mason, 39, 1, J. B. Cadena sur, 327 ft from n and 305 ft from e line. Magnolia Pet. Co., Dallas, G. W. Eaton, 40, 5, F. Cordova sur, 330 ft from n and w lines. Lion Oil & Ref. Co., El Dorado, Ark., H. Brocks, B, 87, 3, M. J. Pru sur, 150 ft from w and 1834 ft from s line. H. L. Hunt, Tyler, I. R. Thrash, 57, 4, F. Cordova sur, 225 ft from s and 315 ft from e line.

RUSK COUNTY — Golding & Murchison, Dallas, R. W. Fair, 100, 1, M. J. Pru sur, 330 ft from n and 240 ft from e line. T. A. Johnston, Tyler, R. E. L. Silvey, 8, 1, Tutt sur, 150 ft from n and e lines. Robt. D. Gordon, Fort Worth, M. Brock, 3, 1, R. W. Smith sur, 150 ft from s and w lines; M. L. Thompson, 7, 2, F. Cordova sur, 150 ft from s and w lines. East Texas Ref. Co., Dallas, O. H. Grissom, 84, 2, F. Cordova sur, 450 ft from w and 530 ft from s line. Patterson Drilling Co., Henderson, Brightwell, 6, 1, R. E. Winn sur, 150 ft from n and w lines; 2, 150 ft from n and e lines. A. F. Richardson, Tyler, L. Morse, 3, 1, R. W. Smith sur, center. Gulf Prod. Co., Houston, W. L. Murphey, 76, No. 5 F. Cordova sur, 330 ft from s and e lines.

SHACKLEFORD COUNTY—Jake Young, Abilene, C. King, 40, 1, S 216, E. T. Ry. sur, 330 ft from n and w li sw¼ of nw¼. Scott & Walker, Albany, L. C. Huskey, 320, 10, 568 TE&L sur, 300 ft n of No. 9.

SHELBY COUNTY — Harry Elliott, Fort Worth, J. H. Windham, 296, 1, Wm. Leach sur, 2000 ft from n and 300 ft from e line.

SMITH COUNTY—Humble Oil & Ref. Co., Houston, M. C. Thompson, 126, 3, I. Moore sur, 200 ft from n and w lines.

THROCKMORTON COUNTY — Shappell Oil Co., Wichita Falls, U. C. S. L., 40, 8, UCSL sur, 150 ft from n and 918 ft from w li Blk. 27.

UPSHUR COUNTY—Arcadia Ref. Co., Tyler, A. O. Phillips, 25, 1, S. Harrell sur, 250 ft from s and e lines. Humble Oil & Ref. Co., Houston, E. Edwards, 70, 2, D. Ferguson sur, 330 ft from e and 250 ft from s line. Sun Oil Co., Dallas, V. J. Watkins, 42, 1, J. M. Pineda sur, 282 ft from n and 300 ft from w line. Gibson Oil Corp., Amarillo, W. F. Smith, 50, 1, J. M. Pineda sur, 330 ft from s and e line. Chatham Oil Co., Tulsa, Okla., H. Fenton, 40, 1, D. Ferguson sur, 300 ft from e and 150 ft from s line.

WHARTON COUNTY—W. R. Alexander, Houston, L. Hahn, 152, 1, No. 13 sur, 830 ft from e and 150 ft from s line.

WICHITA COUNTY—R. N. Hamilton, Wichita Falls, F. Pruitt, 160, 1, Blk. 6, TCSL sur, 600 ft from w and 150 ft from n line.

YOUNG COUNTY—R. C. Turman, Loving, W. C. McGee, 160, 1, 1944 TE&L sur, 150 ft from n and w lines. Wooten & Reed, Graham, J. L. Jordan, 255, 4, 1903 TE&L sur, 1350 ft from e and 150 ft from s li sec. R. J. Watson, 101, 8, 249 TE&L sur, 1100 ft from n and 1742 ft from e line. Terrell & Mason et al, Newcastle, G. W. Terrell, 31, 2, 248 TE&L sur, 348 ft from e and 450 ft from s line; 3, 348 ft from e and 750 ft from s line.

Wildcat Reports From All Sections

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SOUTHERN CALIFORNIA

Company, Well and Location	Production Initial Bbls.	Depth
Standard's Irvine 1	*	5627

ALHAMBRA—Yellowstone Oil Co.'s Huntington 1, 24-1-13, re-dr 2900 ft.

CALABASAS—L. W. Rucker's No. 1, 26-1-17, dr shale 528 ft. Simi Oil Co.'s No. 1, 18-1-17, rigging up rotary.

FULLERTON—Standard's Bastanchury 1, 21-3-10, plugging back, td 8144 ft.

HERMOSA BEACH—Baxter Pet. Corp.'s No. 1, 6-4-14, lcn. Carniel Oil Corp.'s No. 1, 31-3-14, co 3100 ft, will test. Westwood Oil Producers' No. 1, 6-4-14, testing water shutoff, td 2055 ft.

NEWPORT—Ajax Pet. Co.'s B. G. 1, sdtr iron 4890 ft. Nuoil Co.'s Gessell 2, 26-6-10, dr shale 1925 ft, failed on pumping test; Gessell 3, lcn.

OLINDA—Graham-Loftus Oil Co.'s No. 1, 18-3-9, sd 9241 ft.

SAN FERNANDO—El Caballero Estates' No. 1, 25-1-16, dr hard sand 1260 ft.

SAN PEDRO—Pedro Pet. Corp.'s No. 1, 15-4-14, sp.

SAN DIEGO COUNTY — Oklahoma Oil Corp.'s No. 1, dr surface sand 150 ft.

NORTHERN CALIFORNIA

SANTA BARBARA COUNTY—		
Bolsa Chica Oil Corp.'s Permit 191-1, 24-4-9	*	5510

KERN COUNTY

BLACKWELL'S CORNER — Temblor Oil and Development Co.'s No. 1, 14-26-19, sd 1012 ft, will deepen.

BUTTONWILLOW — Graham-Loftus Oil Co.'s Carmel 1, 20-27-22, dr shale 300 ft. Milham Exploration Co.'s Page 1, 6-28-23, dr out cemt 3050 ft.

CARRIZO PLAINS—Trav-El Oil Co.'s No. 1, 7-32-22, dr hard sand 2400 ft.

DEVIL'S DEN—Cumberland Oil Co.'s No. 2, 17-26-18, dr hard sand 1725 ft.

LOST HILLS—General Pet. Corp.'s No. 1301, 13-26-20, dr shale 4300 ft. Lincoln Drilling Co.'s Theta 1, 12-26-20, cored oil sand 4815 ft, lost drill pipe, may make test later.

McKITTRICK — California Oil Producers' No. 2, 30-30-22, dr shale 5675 ft.

TEMBLOR HILLS—Kent & McDonald's No. 1, 3-32-22, dr shale 1950 ft.

WEED PATCH—Shell's Porter-Day 1, 29-30-29, pumping 125 bbls, plugged to 5789 ft, td 8419 ft.

SANTA BARBARA COUNTY

GOLETA—General Pet. Corp.'s More 3, dr shale 6670 ft. Ohio Oil Co.'s Oakley 1, 16-4-28, dr brown shale 2600 ft.

LOS ALAMOS—N. S. Wilson's No. 1, 2-7-35, sd 3450 ft.

ORELLA—Oakburn Oil Co.'s Permit 169-1, dr out cmt 2821 ft.

SANTA MARIA — Western Gulf Oil Co.'s Bradley 1, dr shale 7250 ft.

VENTURA COUNTY

BARDSDALE—Buenaventura Oil Co.'s No. 1, 12-3-20, sd 1368 ft.

HOPPER CANYON — Bardeen Pet. Co.'s No. 1B, 13-4-19, dr shale 870 ft.

RINCON—C. C. M. O. Co.'s Hobson A2, 23-3-4, lost tubing in hole at 7800 ft, testing upper showings, td 10,030 ft. Continental's Grubb 1, 23-3-4, dr shale 6300 ft, water shutoff faulty.

SANTA PAULA — San Pedro-Pt. Fermin Synd.'s Kellerman 2, 13-4-21, fsh for cas 3100 ft, td 3400 ft.

SOUTH MOUNTAIN—H. H. Bell's Lemon 1, 22-3-21, dr shale 500 ft.

MISCELLANEOUS

FRESNO COUNTY—Associated's Mitchell 1, 22-21-15, swabbed water, sd 6198 ft.

KINGS COUNTY—L. W. Seymour's No. 1, 10-23-16, pumping water 1010 ft. Knudsen and Schmidt's Avenal 1, 36-23-17, sd 4305 ft. Kettleman Lakeview Oil Co.'s No. 1A, 20-23-20, sd 1095 ft.

MENDOCINO COUNTY—Twin State Oil Co.'s Soldani 1, 14-12-17, dr hard sand 7240 ft.

MONTEREY COUNTY—Pacific Inland Oil Co.'s No. 1A, 19-23-15, fsh for core barrel 1350 ft.

SAN LUIS OBISPO COUNTY—A. T. Jergin's No. 1, 6-32-13, running oil string 1875 ft. Central Coast Investment Co.'s No. 1, 1-28-12, rigging rotary. C. J. Schilling's Potter 1, 1-29-22, dr shale 1400 ft.

TULARE COUNTY—Ducor Drilling Co.'s No. 1, 14-24-27, co 2180 ft. W .A. Campbell's No. 2, 22-22-27, lcn.

ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sed ment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spuddn g; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

ARKANSAS

CHICOT COUNTY—W. R. Smith's Lytle 1, 31-18-3, ta 2925 ft.

CLAY COUNTY—S. C. Jeffus, Tr.'s, Underwood 1, 4-20-8e, sd 1252 ft.

CLEBURNE COUNTY—Donnell et al's Fee 1, 33-11-9, sd after testing sw 3515 ft.

CLEVELAND COUNTY—Crumm & Stilwell's Bell 1, 10-10s-12w, rig.

COLUMBIA COUNTY—Kendall Oil Co.'s Fullenwider & Kitchen 1, ne ne 13-17-22, 8¼ cas 800 ft, sd 804 ft.

DALLAS COUNTY—Zepp O&G Co.'s W. E. Hillman 2, se ne 20-10-13, 10-in 135 ft, dr hard sandy shale 1583 ft. Jno. James Tr's Fordyce Lbr. Co. 1, 11-9s-15w, sd 2520 ft. E. C. Brewer, Tr's Hillman 1, 20-10-13, sd in white sand 2869 ft.

DREW COUNTY—Co-operative Dev. Co.'s Hardy 1, ne ne 6-13s-7w, 12½ cas 97 ft, sr 1750 ft hard sand.

HOT SPRINGS COUNTY—Starr Oil Co.'s Cunningham 1, 11-5-16, 12½ cas 62 ft, sd 1262 ft, shale and bldrs.

JOHNSON COUNTY—Blackwell O&G Co.'s Wyver 1, 21-8-23, a 5600 ft.

LAWRENCE COUNTY—Marguerite Dev. Broadway 1, 31-17-1, sd 45 ft.

LINCOLN COUNTY—L. B. Cook, Tr's McGehee Pltg. Co. 1, 5-8s-7w, fsh stuck ds td 2800 ft.

LITTLE RIVER COUNTY—Fay Roberts Oil Co.'s Russell 1, 25-12-29, lcn.

LOGAN COUNTY—M. W. Greesom's Parks 1, 21-8-24, sd 1309 ft. J. H. Flowers' White 1, 13-5-26, sd 3610 ft.

MILLER COUNTY—W. E. Noel et al's Dickson 1, 11-20-27, sd 1955 ft, shale and gumbo.

OUACHITA COUNTY—W. H. Copenhaver et al's Berg 1, se se 13-15-17, sp 10-in 42 ft, td 56 ft.

PIKE COUNTY—Henderson et al's Tilyou 1, 26-8-24, ta 2920 ft. Kentucky-Ark. O&G Co. Inc.'s East 1, 13-9-23, 10-in 288 ft, td 300 ft.

SCOTT COUNTY—Heavener O&G Co.'s Reser 1, 36-4-26, sd 1536 ft. Waldron O&G Co.'s J. G. White 1, 17-3n-29w, sd wo cas 1860 ft. (sec. hole.)

SEBASTIAN COUNTY—M. W. Greesom's Spears 1, 9-7-29w, sd 1536 ft. Ozark Nat. Gas Co.'s Giard 1, 34-8n-30w, dr sand 2926 ft.

SEVIER COUNTY—Tri-State O&G Co.'s Bank of DeQueen 1, 34-8s-32w, rigged up and sd.

UNION COUNTY—Southern Prod. Co.'s Wingfield 1, 16-19-15, sd 2608 ft. Lion O. R. Co et al's Guy P. Hayes A-9, ne ne 4-16-15, elev. 96 ft, running straight hole tester, td 5236 ft. (6000 ft test.) Wilson & Chapman's Handley 1, 3-18-13, ta 3570 ft. Doty Norman A-1, 3-18-13, lcn. Doty Norman B-1, 3-18-13, lcn. Henry Norman 1, 3-18-13, 10-in 120 ft dr red beds 3103 ft. Marine Oil Co.'s W. B. Thompson D-1, 3-18-13, rigged up and sd. P. Winn Est. A-2, 11-18-13, ta 3586 ft.

WASHINGTON COUNTY—Lincoln Lease Holding Synd.'s Townsite 1, 3-15-32, ta 1500 ft. C. H. Willoughby's Jones 1, 34-16-30, sd 2150 ft. O'Hara & Shetterley's Boyd 1, 2-16-32, ta 650 ft. Delbert Graves' Cunningham 1, 14-15-32, sd in gray sand 602 ft.

VAN BUREN COUNTY—J. S. Martin's Scanland 1, 5-9-13, sd 50 ft.

YELL COUNTY—T. Luckett's Balcon 1, 36-7-12, sd 5710 ft.

MISSISSIPPI

ADAMS COUNTY—Ark. La. P. L. Co.'s Brandon Halls Farms Inc. 1, 32-8n-1w, rigged up and sd.

CLARKE COUNTY, (Quitman Dist.)—Gulf Ref. Co.'s Long Bell Lbr. Co. A-1, sw sw 10.2n-16e, 15½ cas 105 ft 10-in 956 ft dr sandy shale 2058 ft.

CHICKASAW COUNTY—Hightower & Golson's Fleming 1, 20-13s-3e, driving 5-in pipe td 1640 ft.

HUMPHREYS COUNTY — Danciger O&G Co.'s Bellgrade Lbr. Co. 1, nw nw 29-14n-4w, cemtd 10-in cas 659 ft.

JASPER COUNTY, (Bay Springs Dist.)—Bay Springs Pet. Inc.'s J. H. Keyes 1, nw ne 21-2n-10e, sd 2360 ft Wilcox.

MONROE COUNTY, (Amory Dist.)—Amory Dev. Co.'s Bourland 1, 2-15-19, ta in brown sand 3007 ft. P. J. McAlpine's Cowart 1, 2-12s-19w, cas parted at 1500 ft. sd 3404 ft. lime. Associated Royalties' School Board 1, sw se 16-15-17, ta 60 ft.

NEWTON COUNTY, (Newton Dist.)—Dalton Dev. Co.'s Majure 1, se se 25-6n-11e, rigged up and sd.

NOXUBEE COUNTY, (Macon Dist.) — Thompson O&G Co.'s Donahue 1, se ne 25-16n-17e, elev. 280 ft. 12½ cas 20 ft. 8¼ cas 1541 ft. sd for fuel 1715 ft. sandstone. Ames 1, nw nw 24-16-18e, elev. 247 ft. mov in rotary rig from Donahue 1.

RANKIN COUNTY, (Jackson Dist.)—Gulf Ref. Co.'s Hanna A-1, nw se 23-5-1e, 15½ cas 82 ft. 12½ cas 840 ft. top black shale 2471 ft. top chalk 2562 ft. 4-in drill pipe stuck at 2745 ft, broke down drill rods, preparing to go over 4-in with rotary shoe and wash loose stuck drill pipe, td 2815 ft. Atkisson & Dyer's Valentour 1, 18-5-2e, cemtd 12½ cas 60 ft. Majestic O&G Co.'s Elton Lbr. Co. 110-4n-3e, dk.

SCOTT COUNTY—Culley et al's Owen 1, 2-8n-9e, dk.

WARREN COUNTY, (Vicksburg Dist.)—Eagle Lake O&G Co.'s Kiger 1, sw ne 9-18n-2e, sd 2607 ft.

WEBSTER COUNTY — P. J. McAlpine's Henley 1, se nw 15-21-11e, cored gravel sd 1900 ft.

WINSTON COUNTY, (Louisville Dist.)—Miss. Drilling Co.'s Scarbrough 1, nw nw 15-13-14e, dr black lime and shale 3802 ft.

ALABAMA

MADISON COUNTY — Tennessee Valley O&G Co.'s Fee 4, 1-4s-2e, no report.

SUMTER COUNTY, (Livingston Dist.) — Forked Lightning O&G Co.'s Nixon 1, 30-20-2w, dk.

WASHINGTON COUNTY—Hobson et al's Wilson 1, 27-7-1w, driving 8-in pipe td 925 ft.

Wilcox. Hobson Bros. 1, 9-8-2w, ta 1450 ft. Oscar Brown's U. S. Land & Cotton 2, 25-3-2w, ta 700 ft.

TENNESSEE

DECATUR COUNTY—Chester County O&G Co.'s Montgomery 1, dr petriliferous limestone 2436 ft.

OKLAHOMA

ALFALFA COUNTY—T 2n, R 11w, Sec. 12, Smith Bros., Forbes 1, ne c se nw nw, sd 1420 ft.

KAY COUNTY—T 27n R 2e, Sec. 9, Mummer et al, Sernick 1, ne c se, hfw 2070-2170 ft sd 3693 ft.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden et al, Collmer 2, ne c se ne sw, sd 5640 ft tools in hole.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, J. V. Bailey et al, Acre 1, c sw ne, show gas 5298-5303 sd 5502 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer, White 1, se c nw, fsh tools 5850 ft.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma Pet. Co., Phillips 1, c nw sw, td 5120 ft to aban.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healey et al, Quier 1, se c sw, sd 3970 ft.

KAY COUNTY—T 28n, R 3e, Sec. 24, Summitt Drlg. Co., Hays 1, nw ne nw, td 3675 ft pb 3222 ft shot 10, 10, 20 and 60 qts. d&a.

PAWNEE COUNTY—T 23n, R 5e, Sec. 15, Cochran et al, McFadden 1, ne c sw, rig. T 22n, R 5e, Sec. 2, Sherry et al, Milsap 1, se c sw, hfw 3505-50 ft sd 3552 ft. T 20n, R 5e, Sec. 6, W. A. Rookstool et al, Berry 1, nw ne sw, sd 1951 ft show gas.

OKFUSKEE COUNTY—T 12n, R 10e, Sec. 3, Shepperd et al, Shepperd 1, se nw sw, sd 3690 ft.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Pattison et al, McDuff 1, sw nw se, show gas 5856-64 td 5733 swabbing.

LATIMER COUNTY—T 6n, R 19e, Sec. 16, P. English et al, Weaver 1, c nw se, sd 1542 ft.

OKLAHOMA COUNTY—T 12n, R 4w, Sec. 17, C. F. Cuniff, Trustee, St. Joseph 1, sw c ne sw se, sd 6700 ft.

SEMINOLE COUNTY—T 10n, R 6e, Sec. 19, Bunte et al, Bruner 1, se c nw, rig.

ROGER MILLS COUNTY—T 12n, R 24w, Sec. 23, Ute Oil Co. et al, Williams 1, c sw, sd 5150 ft. T 11n, R 26w, Sec. 4, J. J. Rook and Palmer, Davis 1, c nw ne (owd) dr 3240 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey et al, Robinson 1, c ne nw, sd 150 ft.

WASHITA COUNTY—T 8n, R 19w, Sec. 29, Snodgrass et al, Blocker 1, nw c, dr 2249 ft. T 8n, R 18w, Sec. 21, Burns & Prince, Dock 1, sw c, sd 1050 ft.

GREER COUNTY—T 7n, R 22w, Sec. 1, Good & Dowell, Cliffel 1, nw c, sand 1462-1501 ft sd 1745 ft. T 7n, R 21w, Sec. 23, H. A. French, Murphy 1, sw nw se, sd 1654 ft.

GARVIN COUNTY—T 2n, R 2w, Sec. 24, Malernee, Phillips 1, ne c sw, sd 4800 ft.

COAL COUNTY—T 1n, R 8e, Sec. 35, W. E. McCraw O&G, Stiring 1, ne c se, sd 1730 ft 8-in 1765 ft w.o.c.

ATOKA COUNTY—T 3s, R 10e, Sec. 18, Brookshire et al, Guinn 1, ne c, show gas 360-72 ft sd 1540.

BRYAN COUNTY—T 7s, R 10e, Sec. 8, Bryan Oil Co., Childs 1, ne se sw, sd 660 ft.

KANSAS

MORTON COUNTY—Hydraulic Oil Co., State land 1, nw se, 22-34-43w, sd 3460 ft.

SUMNER COUNTY—Trees Oil Co. & Shell, Springate 1, ne se sw, 6-34-2e, 10-inch 1652 ft, co. Spencer et al, Porter 1, ne sw 12-23-4w, td 3240 ft, ur 8-inch. Otstot et al, Warlow 2, c se nw se, 22-33-3w, T. chat 4070 ft, so 4080 ft, water 4116 ft, td 4150 ft, fsh tools.

HASKELL COUNTY—Trees Oil Co., Warner 1, c se, 29-30-34w, td 550 ft, csg trbl.

FORD COUNTY—Carter et al, Community-Everett 18, c ne, 22-20-21w, td 5961 ft, prep to dr with 4-inch.

SEDGWICK COUNTY — Magnolia, McLaughlin 1, nw c 31-28-1w, 3522-25 ft, hfw, dr 3705 ft.

FORD COUNTY—Swain et al, Henthorn 1, c nw, 21-25-24w, 5-inch 4645 ft, td 5105 ft, sd.

STAFFORD COUNTY—Rosenthal, Stanolind & Amerada, Gray 1, c ne, 11-34-13w, sd 2900 ft.

HARVEY COUNTY—Liggett et al, Davis 1, c sw se ne, 7-24-1e, dr 690 ft.

FINNEY COUNTY — National Ref. Co., Wells 1, sw c 30-23-30w, rig.

HARVEY COUNTY—J. P. Flanigan, Sheridan 1, c sw, 32-22-1e, chat 2951 ft, td 2960 ft, ur 8-inch.

COFFEY COUNTY—Hegberg et al, Kroft 1, se sw se, 30-22-14e, 10-inch 818 ft, sd 1565 ft.

BARTON COUNTY—McCool et al, Isern 1, c sw se ne, 12-20-11w, 8-inch 2160 ft, dr 2210 ft.

BARTON COUNTY — Skelton Oil, Ott 1, c se se, 16-19-14w, dr 2600 ft.

RICE COUNTY — Deitrick & Langston, Purcell 1, nw c, 33 19-9w, dr 3375 ft, pb to 3285 ft, shot 15 3265-80 ft, oil swabbed down and filled 400 ft oil in hole 14 hrs, sd.

BARTON COUNTY — Syndicate Oil Co., sd.

CHASE COUNTY—Borden et al, Atkinson 1, nw se, 18-18-7e, machine.

MORRIS COUNTY—Allender et al, Wycoff 1, c sw se 5-17-7e, sd 105 ft. Urschell et al, Bersuch 1, c nw se nw, 10-17-7e, ru and sd.

ELLSWORTH COUNTY — Keys et al, Gregory 1, sw c 23-17-9w, td 2735 ft, sd for 6-inch.

MORRIS COUNTY—Hankenson et al, Cessnum 1, sw se 24-17-9e, sd 2625 ft.

ELLSWORTH COUNTY — Milton et al, Kaster 1, se ne 6-14-9w, td 3576 ft, sd for 5-inch.

OSAGE COUNTY—Riggs-Smith, Wood 1, c se nw 31-14-15e, 10-inch 1050 ft, sd.

RUSSELL COUNTY — Austin Drlg. Co., Rockefeller 1, se c 6-13-12w, 3320-25 ft hfw, td 3374 ft, sd.

SALINE COUNTY — Twin Mounds Oil, Weis 1, c w½ ne nw, 30-13-4w (owd) td 2710 ft, dr by 8-inch.

DICKINSON COUNTY—Severs et al, Livingood 1, ne sw 13-13-2e, sd 4170 ft.

RUSSELL COUNTY—Gilbreath et al, Bratton 1, c ne, 33-11-13w, pb 3189 ft, sd.

LINCOLN COUNTY—Buck et al, Schulz 1, c se ne sw 19-11-6w, rog.

GRAHAM COUNTY — Schleimeyer et al, Clark 1, sw ne ne 11-9-25w, 4629-4646 ft hfw, td 4648 ft, sd.

CLAY COUNTY—Nebraska Oil, Tivier 1, sw c 19-8-9e, sd 2700 ft.

SHERIDAN COUNTY — Flo et al, Shoemaker 1, se sw sw, 27-27-26w, dr 2720 ft.

WASHINGTON COUNTY — Sincox, Penwell 17, nw se nw, 16-3-3e, sd 1720 ft.

RAWLINS COUNTY—Danciger et al, Unknown 1, sw c 3-2-35w, 6-inch 3495 ft, dr 3670 ft.

WYOMING

CARBON—Midwest Refining Co., U. P. 27, 27-11-81, dr 3780 ft. Prairie O&G Co., Bunker Hill 1, 29-27-87, dr 3655 ft. P. & R., Overland Dome 1, 19-20-83, sd 1366 ft. Vermillion Oil Co., sw 16-12n-99w, dr 4412 ft, last report.

CONVERSE—Phillips Pete Corp., 27-32-69, dr 11th core test. John Ackard, 24-33-72, gas show 1490 ft. Gust Anderson, se 7-35-75, lcn. Otto Olston, 6-32-74, fsh tools, td 670 ft.

FREMONT—Wiebolt et al, 35-33-99, sd 1850 ft. Ward O&G Co., 28-34-90, dr 2200 ft. Yellowstone Oil Co., 14-38n-94w, dr bel 617 ft, according to last report.

LINCOLN—Wyo. Prod. Co., 14-24-113, 1700 ft, according to last report.

NATRONA — Midwest's 11, nw 32-34n-77, stand 5340 ft. Midwest's Midway 1, ne 23-35n-79w, co 5945 ft. Summit Oil Co., 21-33-80, dr 1400 ft. Quintet Oil Co., se 13-33-79, mvg in.

NIOBRARA—Globe Pete Corp., 2-39-61, dr 248 ft, according to last report.

SHERIDAN—R. & D. Oil Co., se 21-57-87, sd 940 ft.

SUBLETTE—Cretaceous Oil Co., sw 7-28-113, stand 350 ft.

UINTA — Transwestern Petroleum, Ltd., 6-14-118, fsh tools 3100 ft. Clawson et al, 29-14n-118w, lcn. Park City O&G Co., 16-15n-113w, to resume 2715 ft.

WASHAKIE—Ohio Oil Co., lot 14, 19-45-92, set 7-inch at 7260 ft, td 7325 ft.

WESTON—LeFaivre Oil Synd., se 29-45n-68w, sd 1314 ft. Gose Synd., 28-47-65, dr 4929 ft. Julius Peters et al, Witzell 1, se nw 30-46-64, co 1940 ft. Stockade Anticline Synd., 32-45-60, dr 712 ft, according to last report.

MONTANA

CASCADE—Andover Oil Co.'s Floweree 1, se 29-21-2w, td 2175 ft, hole full sulfur water.

CHOTEAU—Williston Shelby O&G Co., S. Flack 1, se 12-28-11e, hfw, try to dr up show 2867 ft.

GALLATIN—Gallatin Valley Oil Co., 1-1n-4e, td 800 ft, no recent report.

GLACIER—Fulton Pete Corp.'s Blackfeet 1, ne 28-38-12w, dr out cem 2600 ft. Browning Dev. Co., Reickhoff 1, ne 3-34n-6w, rig up. R. C. Tarrant et al, Hagland 1, sw 13-34-6w, rigging up.

GOLDEN VALLEY—Golden Valley Oil Co., 28-6n-22, td 2050 ft, according to last report.

LIBERTY—Peoples O&G Co., First Nat'l

NEW! the PETOL
WELDING OR ROLLING
TONG

To meet the requirement for a light, strong, double-acting tong for rolling pipe in either direction on welding jobs, the new Petol Welding or Rolling Tong has been developed. From the day it was first demonstrated in the field, orders have poured in from virtually every pipe line job now in progress.

The new tong is of the chain friction type, and has no teeth to cut or mar the pipe. Without being removed from the pipe, it turns pipe toward or away from the operator. The large illustration shows tong in position to turn pipe toward operator; the small one shows it turning pipe away from operator. Grip is instant and positive in either direction, and release is also instant and positive. Tong can not bind or freeze on pipe so as to rotate it when being released. Ratchets freely in either direction. Weight is carried on pipe, making operation easy. Furnished with exceptionally long handles for convenience and leverage. Jaws made in one piece, eliminating spreading. Each size of jaw fits several sizes of pipe. Jaws furnished to fit pipe from 6 inch to 26 inch, and all jaws are quickly interchangeable by removal of one bolt. Made of nickel chrome steel throughout. Heavy, heat-treated chain furnished. Furnished in three handle lengths, with jaws of the following sizes: 4-inch, 6-inch, 8-inch, 10-inch, 12-inch, 14-inch, 16-inch, 18-inch, 20-inch, 24-inch, 26-inch. Illustrated descriptive pamphlet on request.

GEARENCH MFG. CO.
313-323 Hughes Street
HOUSTON - - - - TEXAS

NEW YORK HOUSTON LOS ANGELES

Bank 1, ne 17-36-6e, sd 1285 ft. California Co., for Utopia Oil Co., se 11-33-6e, dr 3235 ft. Northland O&G Corp., Yurman 1, sw 32-33-5e, cem cave at bottom, 3700 ft.

ROSEBUD—Prairie O&G Co., 1-XX, 26-10-39e, wait for hematite to mud off water at 2135 ft.

SWEETGRASS—Shoshone Cons., nw 23-2n-15e, run 6-inch, td 5793 ft.

TETON—Andover Oil Co.'s Carlson 1, 5-24-4w, stand 150 ft. California Co.'s Sullivan 1, nw 34-27-7w, fsh 1925 ft. Earl Oil Corp., Gad 1, se 22-22-8w, td 3730 ft. Trans-American Oil Co., State 1, sw 21-24-8w, dr 825 ft, hfw.

TOOLE—Liquid Gold Oil Co.'s Elbert 1, ne 25-36-12, to run 5-inch to s.o.w. 2480 ft. Oregon Oil Synd., se 20-36-2e, dr 760 ft.

YELLOWSTONE—Pan American Oil Synd., 23-2s-24e, dr 1300 ft.

NEW MEXICO

CHAVES—Neal et al's Russell 1, nw 21-14-25e, sd 2320 ft.

BERNALILLO — Norrins Realty's Pajarito Grant, 22-9n-2e, prep to sp.

DE BACA—Salado Dome Oil Corp., sw 6-4n-20e, cemt cave 3181-89 fet. Landowners Oil Co.'s State 1, ne 16-1s-27e, dr at 4519 ft.

GUADALUPE—N. M. Prod. & Ref. Co.'s McMullen 1, 24-5n-16e, to case to 1819 ft with 12½-in.

HARDING—Kummbaca O. & G. Co.'s Kerlin 1, se 34-21s-30e, 3M carbon dioxide gas at 972 ft, sd.

LUNA—Angelus Oil Mining Ass'n., 20-21s-10w, co 6160 ft.

McKINLEY—J. W. Halsell's 1, 17-18-9w, sd 3255 ft. Williams et al's A. T. S. F. 1, se 19-18n-8, sd 1900 ft. United Kern Pet., Inc., sw 1-18n-11w, lcn. Dysart et al's Dysart 2, ne 14-14-10w, sd tem at 1315 ft. Johnswood Oil Co.'s Hannett 1, sw 12-15n-10w, making repairs, td 910 ft.

MORA—Fulton Pet. Corp.'s Santa Fe Dioxice Co.'s Wagonmound 1, ne 14-19-21, sd 1316 ft.

OTERO—Ernest et al's 1, se 20-25s-7e, sd 1005 ft. Pasotero Oil Corp.'s Evans 1, sw 22-24s-12e, dr 1445 ft.

RIO ARRIBA—Berrenger et al's Hartman 1, ne 8-29n-7w, sd 825 ft. San Juan Pet. Co.'s Gov't 1, se 14-30n-7w, sd 250 ft. Governor Oil Co.'s 1, se 12-29n-7w, dr 1665 ft.

ROOSEVELT—Peterson et al's Good 1, ne 32-5s-30e, ready to sp.

SANDOVAL—Anshutz et al's Tejon Grant 1, unsectionized, sd 350 ft.

SAN JUAN—Kutz Canon O&G Co.'s Day 1, se 20-28n-10w, dr at 3615 ft. Rio Grande Dev. Co.'s 2, 9-29-11, sd 1530 ft. Continental Oil Co.'s Rattlesnake 24, 1-29n-19w, dr 4765 ft. San Juan Leaseholds' Bowman 3, ne 30-30-15, sd 2685 ft. Reserve Oil Co.'s Reserve 3, se 36-22-14, test good show oil at 814-20 ft. R. C. Oswell et al, nw 34-30n-11w, dr 665 ft. Williams et al's Stallings 1, sw 17-25n-15w, sd 150 ft. Ortega et al's Westwater 2, ne 24-31n-18w, fsh, td 2460 ft. Dorothy Oil Co.'s Terwilliger 2, se 29-30-9, sd 1750 ft.

SANTA FE—Jones, Owsley et al., 5-10n-9e, dr 235 ft.

TORRANCE—Williams et al's Staplin 1, ne 16-8n-10e, sd 1643 ft. Estancia Valley-Carbon Dioxice Dev. Co.'s DeHart 2, se 12-7n-7e, dr 91 ft.

VALENCIA—Harlan et al's Harlan 5, nw 5-6n-2e, dr 1920 ft., according to last report.

COLORADO

ADAMS—N. M. Slatt's 1, se 27-26-64w, carry 8⅝-in at 3747 ft.

ARAPAHOE—McDeb Drlg. Co.'s Fitzsimons 1, ne 7-4n-68w, co 5835 ft.

BOULDER—C. T. Ahlstrand's Woodley 1, nw 8-3n-70, dr 135 ft.

EL PASO—Utemore Synd.'s Cannon 1, ne 10-16s-66w, sd 1125 ft.

GRAND—Oil Mineral Lands, Inc.'s McElroy 1, sw 14-2n-81w, sd 545 ft.

JEFFERSON—Ruby Hill O&G Co.'s Braden 1, se 24-4w-59w, to run 6⅝-in cas and test gas, td 3920 ft.

LA PLATA—McGarr Pet. Co.'s Pinon Mesa 1, ne 34-33n-12, prep to sp. Klem Pet. Corp.'s Olbert 1, se 9-26n-12w, sd 3125 ft. Murchison Oil Co.'s Doescher 1, nw 29-33n-12, dr at 2000 ft.

LINCOLN—Eastern Colo. Oil Corp.'s State 1, 36-14n-57w, fsh 3442 ft.

MONTROSE—Uncompahgre O&G Co.'s Title & Trust 2, 27-50n-10w, td 1021 ft.

MORGAN—Ind. Terr. Illum. Oil Co.'s State 1, ne 16-1n-57w, sd, water shortage 5350 ft. Independent O&R Co.'s Schmidt 1, nw 19-6n-60w, rig. Juhan et al's Kent 1, 2-2n-57w, waiting cas 1200 ft. Colo. Ass. Oil Co.'s Humphreys 1, se 14-4n-58w, rigging up.

PUEBLO—Anchor Oil Co.'s Easley 1, sw 35-22s-57w, td 705 ft, according to last report.

PARK—So. Park Oil Co.'s Milligan 1, se 13-8s-76w, ur 6⅝-in cas to 2405 ft. So. Park O&G Co.'s Easche 1, ne 5-9s-76w, ur 2380 ft.

RIO BLANCO—California Co.'s Raven 1, se 20-2n-102, dr 2020 ft. Magnolia Pet. Co.'s Maddock 1, se 9-2s-96w, 1510 ft.

ROUTT—Fish Crk O&G Co.'s Omholt 1, ne 29-4n-87w, to res at 115 ft.

WASHINGTON—Middlemist Oil Co.'s Middlemist 1, se 14-4-56, sd 1510 ft.

WELD—Reiter-Foster's Johnson-Juhl 1, 14-6n-61w, dr 2970 ft. Aztec Corp.'s State 1, se 16-6n-61w, moving in. Retter Oil Co.'s Smith 1, 14-1n-68w, prep to test show, td 1171 ft. Conoco's Gadbois 1, sw 24-6n-61w, dr 4200 ft. Conoco's Briggs 1, sw 13-6n-61w, dr 5600 ft. Greeley Oil Co.'s Gadbois 1, nw 25-6n-61w, derrick.

TEXAS GULF COAST

Company, Well and Location		Initial Production Bbls.	Depth
BRAZORIA COUNTY—			
Cullen & West, Nash 1		*	5470
FAYETTE COUNTY—			
Elam & Reynolds, Florence 1		*	2600
HARDIN COUNTY—			
Plummer & McDaniels, T. S. Reid 1		*	1320
D. O. Speights, Guidrey 1		*	4325
LIBERTY COUNTY—			
Gulf Prod. Co., Boyt 14		*	6000
Tucker et al, Bell 1		*	3085
MILAM COUNTY—			
Dil-Tex Oil Corp., W. D. Dulbeck 1		*	2435
Wilson Brock, E. L. White 1		*	3750

BRAZORIA COUNTY — Cullen & West's Nash 1, 3 mi e Nash Dome, abn 5470 ft. United Oil Syndicate's Levitt 1, 3 mi n Danbury, John Peske sur, sd in gbo 1560 ft. The Texas Co.'s Belcher 1, se Manvel, cmt 9⅝ cas 5463 ft, 200 sacks, O. S. 5470 ft.

BURLESON COUNTY—Marek & Sons' A. Marek, 3, 2½ miles sw Tunis, N. McFaddin sur, ru and spd. Marts et al's Boyett 1, 5 mi se Wellbourne, dr 2400 ft, stky shale.

CHAMBERS COUNTY—Humphreys Corp.'s Kirby H-8, set 13⅜ cas at 1276 ft on rk., w. o. c.; Eberspacher 1, Barbers Hill, dr 4340 ft sh. Pure Oil Co.'s Lost Lake 6, Lost Lake dist, dredging canal. Sun Oil Co.'s Jno. H. Smith 3, flwing 200 bbls at 5260 ft; Anne Higgins 1, O. S. at 5260 ft.

FAYETTE COUNTY — Elam & Reynolds' Florence 1, abn 2600 ft.

FORT BEND COUNTY—Cullen & West & Gulf Prod. Co.'s George 2, Thompson dome, lcn 600 ft e George 1; Lockwood-Sharpe 3-A, Thompson dome, 600 ft e Lockwood-Sharpe 2-A, dk.

GALVESTON COUNTY — Yount-Lee Oil Co.'s Cade 20, High Island, spd; Cade 22, dr anhydrite, 2997 ft.

GRIMES COUNTY—Rianjo Oil Co.'s Cuthrell 2, 3 mi e Carlos, Pat. O'Connor sur, dr 1015 ft stky sh and lig.

HARDIN COUNTY—Plummer & McDaniels' T. S. Reid 1, abn 1320 ft. D. O. Speights' Guidrey 1, 4 mi s Batson, stuck dr stem at 4325 ft and abn.

HARRIS COUNTY—H. H. Givens & Daybault's Lobit 1, Addicks Dist., 18 mi w Houston, dr stky sh 1810 ft. J. P. Hunnicut's Haney 1, 5 mi w Barbers Hill, ru. W. R. Alexander et al's Herman Hale 1, R. A. Hanks sur, ru.

LEE COUNTY—Polk et al's Stolz-Frede 1, 3 ½mi nw Lexington, D. Cunningham sur, sd 2350 ft. Wheeler et al's Stolz-Frede 1, 3 mi nw Lexington, sd 3350 ft.

LIBERTY COUNTY—Gulf Prod. Co.'s Boyt 14, Hankamer Dist., abn after having tested sw at 6000 ft. Tucker et al's Bell 1, Devers Dist., abn 3085 ft. J. R. Ingram's C. T. Palmer 1, dr gr sh and li 2720 ft. Humble O&R Co.'s Sargent 2, Moss Bluff Dist, slight oil show 5930 ft.

MILAM COUNTY—Dil-Tex Oil Co.'s Dulbeck 1, Rodriguez sur, abn 2435 ft in shell. Wilson Brock's E. L. White 1, Samuel Frost sur, abn 3750 ft. Red Bank Oil Co.'s J. A. Foster 1, fsh 4680 ft, A. G. Perry sur.

MONTGOMERY COUNTY—Humble O&R Co.'s W. A. Renn 1, 4 mi s Magnolia, lcn 750 ft s of n line, 900 ft w of e line, Renn 286-ac tract, S. J. McFarland sur, lcn. G. W. Strakes' South Tex Dev. Co. 1, 2½ mi se Conroe, Theo. Slade sur, spd.

ORANGE COUNTY—Crews Oil Co.'s Mansfield 1, Orange Dist, dr 1610 ft sh. Jefferson Prod. Co.'s Bland 1, Orange Dist, dr st stuck 2980 ft, sd. Texas Co.'s Polk-Kuhn et al 1, Port Neches Dist, dr 1035 ft rk.

POLK COUNTY—Sunshine Oil Co.'s Oliver 1, 8 mi se Livingston, dr 4015 ft sh. W. H. Freeman et al's Freeman 2, 4 mi se Leggett, dr sh 3165 ft.

ROBERTSON COUNTY—Robertson County Drlg. Co. & Hillman's Scheske 1, ½ mi s Ridge, sd in sh 2520 ft. Streeter & Dockery's March 1, 7 mi sw Franklin, prep to make dr st test at 1825 ft.

SAN JACINTO COUNTY—E. P. Edwards et al's J. R. Bennett 1, nw Cold Springs, dr 715 ft in gbo.

TYLER COUNTY—Allied Prod. Co.'s Wilson 3, 16 mi ne Woodville, dr 5020 ft hd sdy shale.

WASHINGTON COUNTY—Penn Tex Oil Co.'s Kansas 2, Brenham Dist, S. M. Williams sur, prep to core at 3218 ft.

WHARTON COUNTY — W. H. Wallace's J. N. Lee 1, 2½ mi s Lissie, lcn 600 ft s and 800 ft w of ne cor sec 18, GH&H RR. sur.

EAST TEXAS

HARRISON COUNTY—O. H. Parkening's T. J. Taylor 1, Walter H. Payne sur, sd 2530 ft, shale and shells. Ryan Cons. Pet. Corp.'s J. M. Furrh 1, T. J. Copelain sur, rig. J. M. Gholson's Bivins 1, T. D. Peterson sur, sd 2759 ft. Olford et al's Bolding 1, W. O. Standfield sur sd 2688 ft. Marshall O & G Co.'s J. R. Watson 1, Thos. Iden sur, rig (5000 ft test planned). Lloyd Oil Corp.'s Timmons 1, Jno. Findley sur, 10-in cas 240 ft.

MARION COUNTY—Ronadeau & Hindman's Lindsey 1, Alex Albright sur, sd 400 ft. J. W. Hamilton's Wood 1, Alex Albright sur, sd 2380 ft. Claunch et al's Laun 1, Henry Fulgram sur, sd 300 ft. Sheldon et al's Brown 1, E. B. Fowler sur, sd 3750 ft.

PANOLA COUNTY—Dillon & Bradham's Baldwin 1, Hampton West sur, sd 1555 ft. United Prod. Corp.'s Steele 17, B. C. Jordan sur, lcn. (Trinity test.) Werner 11, D. B. Lewis sur, sp 15¾ cas 383 ft, dr 1300 ft. (Trinity test). Southwestern O&G Co.'s Vinson 1, C. T. Anderson sur, sd 3873 ft. Daisy O&G Co.'s Rucks Hrs 1, Jno. Palmer sur, sd for water 3264 ft, shale. Moses & Wallace's C. L. Daniels 1, Isabel Hanks sur, sd 650 ft. Hoffer et al's Cameron 1, W. A. Lagrone sur, dk. Davidson et al's Latham 1, Wm. Rich sur, rigging up for deep test td 550 ft. Nelson et al's Williams 1, Jas. Hanks sur, 12½ cas 400 ft sd laying water line td 1500 ft sticky shale. Stamps et al's Chadwick 1, Wm. Scantleberry sur, rig.

SHELBY COUNTY—Chapparral Oil Co.'s Holt 2, Matthew Moore sur, claim sand core sd 3127 ft. E. L. Chapman's Pickering Lbr. Co. 1, C. F. Henry sur, blew out est 25 mil ft gas spray fresh water, killed and set 365 ft 7-in cas, later made some gas, killed again, r to bot td 3864 ft. McRobie et al's Windham 1, Wm. Leach sur, 296-ac tract, rig. Maulding et al's Frost Lbr. Ind. 1, A. B. Fountain sur, dr 2940 ft sandy shale. H. H. Gracey's J. A. Marrison 1, Wm. English sur, sd dr water well, td 2600 ft. I. M. Bradley et al's J. J. Asberry 1, G. W. Mitchell sur, sd 3280 ft sandy lime. T. A. Martin's J. A. Bush 1, Alfred Linday sur, dk and part of rig. Schultz et al's Hughes 1, J. Clay sur, probable base Georgetown 4146 ft sd 4155 ft. C. H. Tautenhahn's J. C. Bogard 1, Thos. Baker sur, sp partly rigged up, sd 20 ft. Glidden and Stephenson's Pickering Lbr. Co. 1, Jonas Harrison sur, top PG 3059 ft top Georgetown lime 3810 ft sd wo in Georgetown lime 3854 ft. Ridgeway et al's

Polley 1, Domingo Gonzales sur, sp dr 300 ft. Geo. L. Pace's Powers 1, Jno. Timms sur, dk. T. W. Tennent's Henry 1, Jno. Spradley sur, top PG 2100 ft fsh ds td 3455 ft lime. K. H. Francis' Jno. Mims 1, Mary Smith sur, 13⅜ cas 40 ft 10-in 393 ft top Midway 847 ft sd repr rig 2612 ft chalk. Smith et al's Carroll 1, J. A. Parker sur, 10-in 180 ft dr lime 3025 ft.

WEST TEXAS

Completions

REVES COUNTY—
Humble O&R Co., Balmorlea Livestock Co. 1 ..... * 4916

CENTRAL EAST TEXAS

RUSK COUNTY—
Leonard Pet. Co.-Cranfill-Reynolds Co., Saenger-Tablowski 1 ..... * 4050

SOUTH TEXAS

ATASCOSA COUNTY — Thos. Draper's Trueblood 1, John Neill sur, No. 119, sd 650 ft prep to re-dr. Glen Mathis' Mrs. G. M. Martin 2, Navarro sur, 3 mi s Amphion, 100 ft sw No. 1, sd 2408 ft.

BASTROP COUNTY—W. A. Allen's Birmingham 1, James Stewart sur, dr 1220 ft. Smith and Burns' Marburger 1, King and Millett sur, sd 570 ft. Texas Dev. Co.'s C. H. Ray 1, Thos. Christian sur, 1½ mi ne Elgin, dk.

BEE COUNTY—Alexander et al's McFall 1, 3 mi s Skidmore, S. Morris sur, dr 1875 ft, no further rep. Cosden Oil Co.'s McKinney 3, Pace sur, Cosden Pool, Pettus, working over. Cosden Oil Co. & Rowan and Moore's Freeland 2, John Pace sur, 1600 ft w Cosden pool, sd 4297 ft. J. C. Hughes et al's P. H. Martin 1, John Lyford sur, just s Holzmark pool, dk. Humble Oil and Ref. Co.'s Garrett Roche sur, ru. J. S. Mauldin's Mauldin 1, G. A. Kerr sur, just s Pettus townsite, sd 3930 ft. Monreal Oil Co. (Mauldin & Fisher) A. J. Kimball 1, Stephin Winship sur, Grayburg district, 7 mi sw Pettus, sd 3550 ft. T. B. Slick Estate's Geo. A. Ray 1, G. A. Kerr sur, in extension pool, 1 mi sw Pettus, mov on. United Prod. Co.'s Ray 39, T. Hanson sur, just ne field, casing set 4506 ft, wait on cement, td 4530 ft.

BEXAR COUNTY—J. E. Anderson's Suburban Irrigated Farms 1, C. Logan sur, near Kirk, 20 mi sw San Antonio on Chicon Lake fault, sd 530 ft. Ingersoll and Miller's E. B. Carruth 2, F. Bolen sur, abn abt 620 ft. W. A. Rogers et al's L. Dunlop 1, Juan Montez sur, sd 612 ft. Schneider, Rees et al's Claussen 1, 12 mi ne San Antonio, SJ&A sur, sd 863 ft. Witherspoon Oil Co.'s Anoil 1, Rialls sur, Cooksey dist, spudded and sd.

BLANCO COUNTY—Hardy Sitton's Standeford 1, sur 155, 3½ mi nw Blanco City, dr below 1100 ft last report; McMillen 1, Benjamin Williams sur, No. 125, 2 mi w Blanco City, sd 686 ft. Forest Oil Co.'s (Rosenfield et al) Hohenberger, sur No. 94, sd 712 ft. Thomas Hicks et al's Specht & Wiedner 1, Thos. M. Fowler sur No. 27, 2 mi s Twin Sisters, set 12½ inch 417 ft, td 420 ft.

CALDWELL COUNTY—Joe Bruner's Malone 1, A. Floyd sur, 2 lcn s Salt Flat, sd 2572 ft. Ralph Lewis et al's Keith McGee 1, Pinchback sur, 8 mi se Lockhart, spudded and sd acct water. Mills & Chapman's McMahon 1, Pinchback sur, 6 mi sw Lockhart, plugged back from 2490 to 2175 ft, shot with 100 qts, no results, now shut down.

COMAL COUNTY — Caldwell & Lanier's T. J. Byler 1, 10 mi s Blanco City, HE&WT sur No. S-894, set 8¼-inch csg at 704 ft.

DE WITT COUNTY—Gibson & Strum's Clark 1, Delores Alderete sur, 3 mi s Yorktown, ru and sd.

DUVAL COUNTY—John F. Camp & Stanolind O&G Co.'s Hubbard 2, sec 73, BS&F sur, 1 mi sw No. 1, 3 1/3 mi se S&O pool, dr 750 ft, set surface csg 40 ft. S. J. Carpenter's Benavides 1, sec 1, blk 38, Mesquite sur, sd 1725 ft for some time, dropped as abn. Coffee et al's Jose Garza 1, center sur 49, Garza Irrigated Lands Co., dry and abn 1920 ft. Duval Oil Corp.'s Bishop Duval Land Co. 4, S&O, sw extension pool, sur 135, spudded, 9-5-31. Frank Garvis's Shallert 1, sur 255, dr 460 ft. Humble O&R Co.'s Kohler 50, sur 164, Kohler pool, dry and abn 7725 ft. L. E. Lockhart's Sutherland 1, GB&ON sur, dr 2035 ft. Magnolia Pet. Co.'s Wilson 4, S&O sw extension pool, sur 134, ru. Southern Gas Utilities Co.'s A. Benavides 1-E, nw cor sec 173, lcn.

FRIO COUNTY—Arthur H. Wray's Roche 1, sec 123, A. Hutzler sur, near Big Foot, 1500 ft sw Burns 1, dr 780 ft.

GOLIAD COUNTY—Stanolind O&G Co. & John F. Camp's Pettus 2, abt 2000 ft nw Pettus 1, lcn.. Gibson Oil Co.'s Parks 2, 5 mi n Goliad, to make lcn.

HAYS COUNTY—J. C. Jones et al's Byler 1, John Ingram sur, 15 mi nw San Marcos, sd 925 ft.

JIM HOGG COUNTY—D. C. Dewitt's T. Gomez 1, sec 12, sd 400 ft. Cole Pet. Co.'s Palacios 1, sur 231, 3 mi s and e Randado field, sd 1360 ft.

KARNES COUNTY—V. F. Neuhaus's I. I. Russell 1, C. Martinez sur, just n Kennedy Runge Highway, dr water well.

KENDALL COUNTY—Borgett et al's W. Hagg 1, W. Avery sur, sd 1250 ft. F. S. Dibble's Ellebracht 1, TW&NG sur No. 77, 1½ mi n Sisterdale, sd 50 ft. Dixon Oil Co.'s Behr 1, Jessie Wilson sur, 3 mi s Sisterdale, dr 2713 ft at last rept. R. M. Perkins' (W. H. Sartain) Lawhorn 1, 30 ft sw original test, D. L. Richardson sur, sw Kendalia, dr 670 ft. Hardy Sitton's W. B. Garvin 1, D. L. Richardson sur, 1 mi ne Kendalie, sd 1480 ft.

KERR COUNTY—Evans and Gant's Seiker and Mears 1, CCSD&RGNR Ry. sur,, sec 1605, 2 mi ne discovery, sd 4031 ft sandy shale; Jeff Love 1, J. Martinez sur No. 1594, sd 4060 ft, brown lime. Evans and Sprinkle's Jeff Love 2, sec 1592, ½ mi se discovery, dr 1490 ft, Trinity sands. Chester A. Martin's J. E. Young 1, A. E. Bruce sur, ne discovery, 1310 ft, mov on 12½-inch csg.

LIVE OAK COUNTY—Henderson Coquat et al's H. Hewitt 1, Thomas Adams sur, sec 4, re-dr, now at 410 ft.

MAVERICK COUNTY—I. N. Boicourt's Banders School Land 2, fsh 2200 ft. Texas Gas Utilities Co.'s Chittim 8, sec 129, blk 7, I&GN sur, Chittim field, fsh 4810 ft.

McMULLEN COUNTY—A. E. Adams' Martin 1, L. E. Melon sur, 15 mi sw Tilden, dr 240 ft. Brodie, Shearer and Emerich's Shiner 1, Henry Brewer sur, 12 mi se Tilden, sd 2008 ft.

MEDINA COUNTY—Frank A. Brown's Jacob Fohn 1, J. F. Ttory sur, 8 mi s Hondo, set surface csg abt 50 ft. Genard Bros.' L. Crawford 1, J. Keppler sur No. 478, dr 1690 ft. J. H. Hickey's Jungman 1, n end Chicon Lake, sd 565 ft, dropped until work resumed. Sunflower Oil Co.'s Mofield 1, Ina field, sur 532, 3 mi w Ina field, abn 2040 ft. Yancey Dev. Co.'s Faseler 1, sur 801, 1½ mi n Yancey, T. Montier sur, ream down to 1945 ft to set csg.

NUECES COUNTY—Gulf Coast Oil Co.'s Sagarin 1, Saxet field, ru; Elder 1, nw Harrell 1, dr 2634 ft, hard sand and lime; Harrell 1, GC&SF sur, sec 311, blk 32, plugged from 5225 ft to 4562 ft, top sand 4553 ft, set ½-inch choke in bottom of hole, flowing abt 185 bbls. Neal-Milton & Kepley Prod. Co.'s Roark 1, 2000 ft nw Saxet Dunn 8, dr 3127 ft hard lime. Saxet Oil Co.'s McCampbell 1, prep to spud. Stanolind O&G Co.'s (Southern Crude Oil Purchasing Co.) Chas. E. Stratton 1, sec 12, Stratton sub, P. Anchow sur, 6 mi s Agua Dulce, dr out plugs, sand 4746-52 ft, show 200 lbs in 5 min.

REAL COUNTY — Evans and Sprinkle's Haby 1, AB&M sur, 7 mi sw Love 1, sec 175, sd 2500 ft.

REFUGIO COUNTY — Blanco Creek Oil Corp.'s Dammann 1, blk 16, Bonnie View Ranch Sub, 8 mi s and e Refugio field, dr 4672 ft. Humble O&R Co.'s M. V. O'Conner 1, John Keathing sur, near Victoria line, sand 2328-49 ft, show oil and gas, dr ahead.

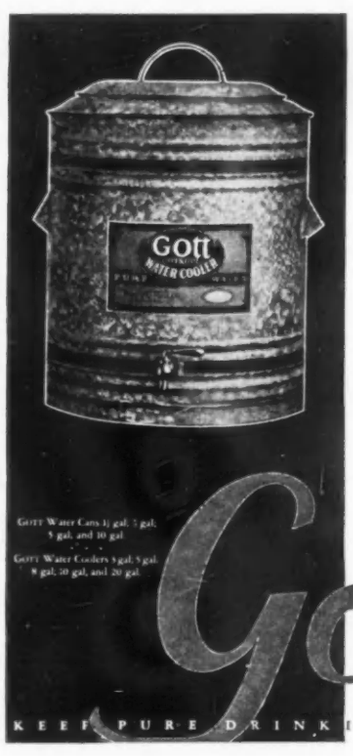
SAN PATRICIO COUNTY — Welder Oil Co.'s Welder 2, Welder gas field, sand 3648-54 ft, test 1000 lbs pressure, no water in 4 min, open flow, coring deeper. Jacob, Buzzini & Pickett's Baldwin 2, 3½ mi s Welder gasser, T. Amarro sur, reaming to 3309 ft.

TRAVIS COUNTY—Fritz Fuch's L. Ballerstadt 1, Amos Alexander sur, dr 1225 ft; A. F. Smith 1, D. Kimbo sur, lcn. C. R. Franklin's J. Wilson 1, A. Alexander sur, spud in. Henze & Ray's J. M. Hatch 1, center s Hamilton sur, dr 110 ft.

VICTORIA COUNTY—Houston Oil Co.'s Konrad 1, T&NO sur, on Beck Salt Dome, n Victoria, dr out plugs, 8¼ inch csg set 4740 ft, total depth 5003 ft. The Texas Co.'s McFadden 3, John M. Rine sur, nw No. 2, dr 3960 ft shale. United Prod. Co.'s McFadden 5-A, C. L. Mann sur, ne No. 4-A, dr 3272 ft.

WILLIAMSON COUNTY — Citizens Oil Dev. Co.'s A. Forewood 2, A. S. Fisher sur, 5 mi ne Taylor, sd 1470 ft. H. Fritz et al's fee 1, HT&B sur, abn 930 ft; fee 2, HT&B Ry. sur, 3 mi sw Taylor, 35 ft n No. 1, dr 150 ft in Taylor marl. Hays & Gee's E. G. Johnson 1, B. C. Low sur, s Georgetown, dr 1325 ft. R. S. Wilson's J. S. Speckley 1, J. Jordan sur, 1 mi n Coupland, ru.

WILSON COUNTY — August N. Blume's Nickelson 1, C. Diaz sur, 2½ mi s Floresville, dr 1345 ft.



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NORTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
NATCHITOCHES PARISH—		
W. M. Coates et al, Collins 1, 28-9-10	*	4091
SABINE PARISH (Zwolle)—		
Dengail Oil Co., Nulton 1, 1-7-13,...	255	2368

BIENVILLE PARISH — Arcadia Drilling Co.'s Atkins 1, 28-18-6w, sr 2156 ft.

BOSSIER PARISH — Andrews & Davlin's Nattin 1, 15-22-14, 4½ cas 2882 ft, flowing 2 to 5 bbls oil intermittently by heads, wo td 2890 ft. Rambaugh et al's Allison 1, 10-19-13, sd 1100 ft. Flint River O&G Co.'s DeMoss 1, 22-22-13, 6⅝ cas 3028 ft, sd wo after testing dry, td 3089 ft, sandy shale. Dr. Hankins et al's Newell 1, 12-19-11, sr, td 1100 ft. D. L. Perkins et al's Ardis 1, 13-15-11, 10-inch 120 ft, top Nacatosh 944 ft, sd wo 1004 ft.

CADDO PARISH—United Gas Pub. Serv. Co.'s H. J. Bussa 1, 33-23-16, lcn (5500 ft test). Pelican Nat. Gas Co.'s Cooper 1, 29-18-14, ta in red shale and lime 3648 ft. W. P. Wallace, Tr.'s, Cunningham-O'Connor 2, nw nw 15-17-14, elev 236.5 ft, top Nacatosh 976 ft, top Blossom 2036 ft, 6-inch 2036 ft, bailed dry at 2047 and 2051 ft, dr 2202 ft, gummy shale. Pyramid O&G Co.'s Breard 2, se nw 10-18-16 coring 2730 ft.

CALDWELL PARISH—Monroe Pet. Corp.'s Burton 1, 36-12-2e, sd acct titles 2986 ft. Carter Bell et al's Taylor 1, 17-14-4e, 12½ cas 110 ft, sd.

CLAIBORNE PARISH — United Gas Pub. Serv. Co.'s Treadwell & Hawks 1, se nw 6-19-5w, trying to set 12½ cas 1500 ft (Upper Trinity test).

DE SOTO PARISH — Rellitt O&G Co.'s Cannon Hrs. 1, 12-11-16, top chalk 1475 ft, base 1810 ft, set 6-inch cas with pckr 1470 ft, claim 10 ft sand with show gas, arr set tub to test gas show, td 1965 ft. W. H. Weichert's Smith 1, 31-14-15, sd 2350 ft. E. T. Oakes' Johnson 1, 3-13-15, base chalk 2160 ft, dr 2236 ft. Walters & Nicholson's Jim Guy, 1, 3-11-13, sd 1260 ft. S. S. Meek, Tr.'s, Wagner 1, se se 5-12-14, 10-inch 101 ft, top hd chalk 1659 ft, base 2839 ft, sd for fuel 2861 ft sandy lime.

LA SALLE PARISH—Gulf Ref. Co.'s Tremont Lbr. Co. 1, ne sw 10-9-2e, 15½ cas 105 ft, cemtd 12½ cas 940 ft shale.

NATCHITOCHES PARISH—C. M. Talley et al's Talley 1, 29-11-10, sd 1380 ft. W. M. Coates et al's Collins 1, sw nw ne 28-9-10, sw sbn, td 4091 ft, sandy lime. J. W. Cooper et al's Cooper 2-A, 35-11-10, sd 1515 ft.

RED RIVER PARISH—Mack Jourdan Co.'s Lockett 1, 33-13-10, sd 2550 ft.

RICHLAND PARISH—National Gas Co.'s Singletary 1, 20-18-7e, sd for fuel 2493 ft. Richland Operating Co.'s Baremore 1, 19-16-7e, 8-inch 870 ft, cemtd 6-inch cas 2280 ft.

RAPIDES PARISH—Pelican Nat. Gas Co.'s Long Bell 1, 3-1n-3w, 12-inch 180 ft, dr 2350 ft.

SABINE PARISH—Langbridge Oil Corp.'s Stephens 1, se se 17-9-11, dr 2875 ft. Houston-Sabine Prod. Co.'s Sabine 1, 35-8-12, sd 2440 ft. J. J. Kean's Belton 1, 31-9-13, 8-inch cas 1590 ft, sd 1610 ft. H. W. Perritt's Bowman-Hicks 5, 2-7-12, sp 10-inch 100 ft, dr 700 ft. A. H. Thames' Edwards Est. 1, 8-8-13, sd 1200 ft. R. L. Gay, Tr.'s, Long-Bell A-1, nw nw 10-8-13, tester 4 fourbles light oil, 5 fourbles sw 3585-3628 ft, coring 3630 ft; Bowman-Hicks 10, sw sw 18-7-13, rig. Ohio Oil Co.'s Bowman-Hicks 9, 35-8-12, lcn; Bowman-Hicks 10, 35-8-12, lcn; Bowman-Hicks 11, 2-7-12, lcn. Diffie & Barrett's Lites 1, 34-8-11, 10-inch 105 ft, sd. Hudson & Bird's Walden 1, sw ne 26-8-11, 10-inch 100 ft, sd 1800 ft. Hawkins et al's Moran 1, se ne 1-7-11, 400 ft oil in hole, wosr, td 2620 ft. Hawkins & Antoon's Newton 1, 1-7-11, wosr 2610 ft. Lyons & Neely's Duggan 1, 14-7-11, lcn. Texas Co.'s DeLatin 1, sw se se 3-7-11, sp dr 90 ft. W. M. Coates' Bowman-Hicks 1, ne sw 2-7-12, oil show in Wilcox 1670 ft, top marl 2230 ft, top chalk 2300 ft, set liner bailing showing oil and sw, td 2441 ft; Sabine 1, nw nw 1-7-12, bldg dk. Towery 1, ne se nw 1-7-13, sp dr 50 ft. Dengail Oil Co.'s Nulton 1, se nw ne 1-7-13, 10-inch 100 ft, 6-inch 2090 ft, top marl 2075 ft, top chalk 2111 ft, flowing thru cas 255 bbls oil day, td 2368 ft. L. K. McGuffin's Byrd 1, 1-7-11, sd 400 ft. Zeke Lohman's McCormick 1, ne sw 2-7-11, sd 1606 ft. Ben Merritt, Tr.'s, Byrd 2, 1-7-11, 10-inch 88 ft, sd. Roy Baker's Sabine 1, 11-7-12, wosr, td 2548 ft. Gautier et al's Meshell 1, 30-8-12, bailing small show oil, td 2530 ft. Lanier & Dyer's Barthold 1, se ne 35-8-12, drill stem recovered, coring 2200 ft. Loring Oil Co.'s Bowman-Hicks 18, sw nw 15-7-12, sp dr 100 ft; Bowman-Hicks 19, sw ne 16-7-12, dk. Pelican Nat. Gas Co.'s La. Long Leaf 10, nw ne 10-7-11, sp dr 50 ft. W. M. Coates' Stille 1, nw se 35-8-13, lcn. G. M. LeGrand's Peterson 1, sw ne 34-7-13, lcn.

TENSAS PARISH—A. R. Willis' Curry 1, 39-11-12e, sd 3545 ft. L. A. Duvall et al's Martin Jacoby 1, ne ne 1-14-11, sp 10-inch 200 ft, dr 300 ft.

UNION PARISH—Don Brooks, Tr.'s Douglas 1, ne sw 9-22-2w, 12-inch cas 170 ft, top chalk 2317 ft, dr sandy shale 2540 ft.

WEBSTER PARISH—D. M. Coyle's Frazier 1, 27-23-11, dk. Cassidy & Davis' Nickerson 1, 29-23-10, sd 160 ft.

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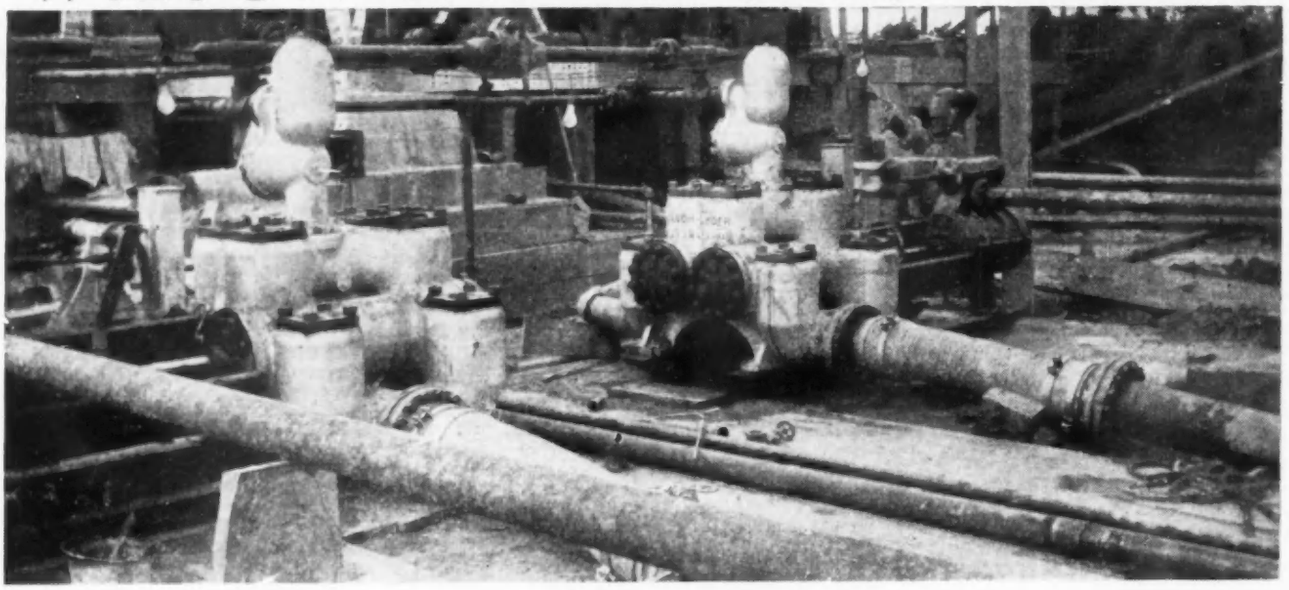
WILSON-SNYDER SLUSH PUMPS



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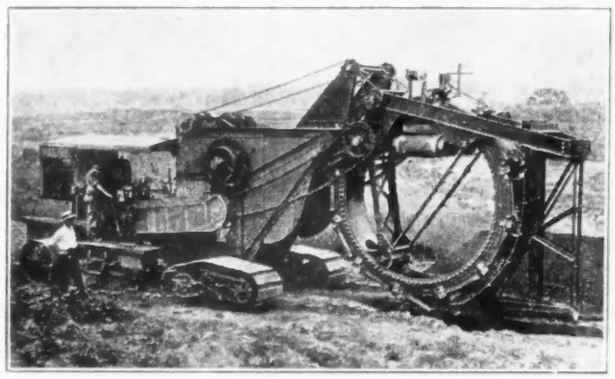
Trench Digging Machines

HARNISCHFEGER SALES CORPORATION

Harnischfeger Sales Corporation, Milwaukee, recently put on the market a new wheel-type trencher designed especially for pipe line work. The new trencher is known as Model 8-36.

Model 8-36 will cut a trench 36 inches wide to a depth of eight feet; converted to a ladder type machine it will cut from 22 to 42 inches wide and 15 feet deep, according to the manufacturers.



Harnischfeger Trencher

The bucket wheel on the trencher has three rotating speeds controlled by means of a gear shift. The buckets are self-cleaning. Speed of the machine may be varied from one to 20 feet per minute, depending upon the depth of the ditch. There are three travel speeds, operated with a gear shift lever. A single hoisting mechanism is used to hoist both ends of the wheel frame. The conveyor can be changed from one side to the other in a few minutes, the manufacturers claim.

Complete details on the Model 8-36 trencher may be obtained by writing Harnischfeger Sales Corporation, Milwaukee, Wisconsin.

Mud Screen

BAROID SALES COMPANY

Baroid Sales Company, Los Angeles, recently has put on the market a new type of mud screen manufactured by Leahy-McNeely Company, Limited. The product is known as the "Lemco" screen.

The screen is mechanically vibrated to separate the drill cuttings from the mud circulating system, with a special design screen expressly fashioned for the separation of solids from the mud. All moving parts are immersed in oil and are tightly enclosed to prevent loss of lubricant or contact with foreign abrasives.

The vibrating units are adaptable to either electric or steam vibrating devices.

Complete information on the "Lemco" vibrating mud screen may be obtained by writing Baroid Sales Corporation, 837 Jackson Street, Los Angeles, California.

Tubing Head

RECTOR WELL EQUIPMENT COMPANY

Rector Well Equipment Company, Fort Worth, recently put on the market a new type of high pressure tubing head called the "Hilton Type."

Practically the entire volume of oil and gas in the head is held by metal to metal contact which cannot be damaged by fire, according to the manufacturers.

The tubing collar on the head is tapered to seat into the body of the bottom flange, making a solid unit of the bottom flange and seating member. The manufacturers claim that in the event of fire this tubing head will stand strains due to excessive heat and will not permit the tubing to drop out of the head. This feature eliminates the necessity of slips.

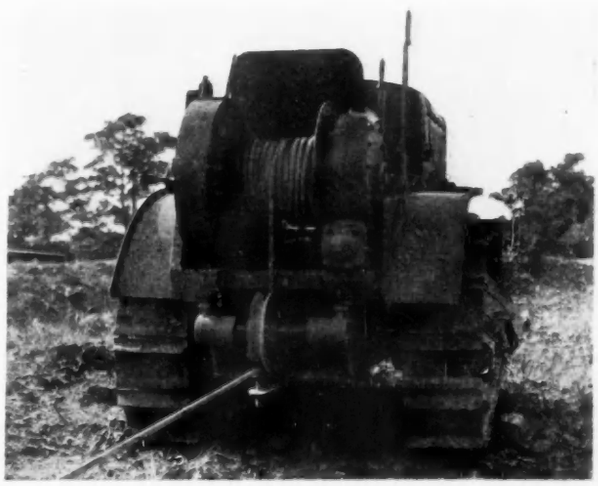
Detailed information on the Hilton Type high pressure tubing head will be mailed on request by Rector Well Equipment Company, 502 Petroleum Building, Fort Worth, Texas.

Hoist

PAUL ARBON AND COMPANY

Paul Arbon and Company, Tulsa, has developed a new hoist of extreme flexibility and having a variety of uses in the oil industry and other industrial fields.

The Arbon hoist is for use with Caterpillar tractors and is made in two sizes, 20-C and 30-C, with 20,000 pounds and 25,000 pounds pull, respectively. Of all steel construction and with the elimination of many moving parts which makes for simplicity without impairment of operation, the Arbon hoist is equipped with hand-operated clutch with positive friction, the drum clutch not being used except to give free spinning drum. The winch may be operated when desired while tractor is traveling. Transmission, worm gear and bearings all are enclosed and running in oil and the draw bar of the Arbon hoist is available for any purpose at any time. The power take-off is through the tractor's take-off by means of a link steel belt.



Arbon Hoist

with power take-off lever rachet operated—in neutral—in forward and reverse.

The boom attachment is of all steel construction with capacity of two tons for loading or stationary loads. One ton may be transported with ease. Stiff leg is optional equipment for ditch work or close up stationary loads up to six tons. Longer booms may be had for higher lifts at small additional cost.

Further information and data on the Arbon hoist will be sent on request to the home offices of the company in Tulsa.

New Composite Steel

INDUSTRIAL WELDED ALLYOS, INCORPORATED

Industrial Welded Alloys, Incorporated, New York, has produced recently a new metal called "Plykrome," a composite metal in which stainless steel is veneered and completely weld-bonded to a mild steel slab and then rolled on a mill to form an integral plate or sheet.

Industrial Welded Alloys, Inc., in addition to the patent on the protection of ordinary steel with a thin integral surface of chromium allow, has complete process patents now pending.

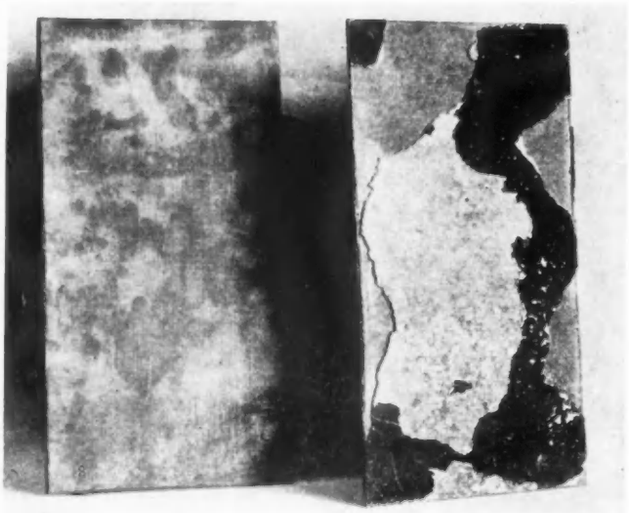
Physical tests demonstrate that the metal can be handled, bent, drawn, spun or flanged without cracking or parting the allow from the steel. The oxidation test, while made primarily to measure the resistance of the relatively thin alloy veneer to high temperatures, is the most conclusive evidence of the perfect bonding of the two metals.

The ratio of alloy thickness to that of the sheet or plate can be anything that is desired. Industrial Welded Alloys, Inc., has made .010 gauge steel strip with an alloy ply of .00125 thickness. The present practice is to recommend a ratio of approximately 1:15 as presenting the opportunity for best economy. In the case of heavy pressure vessels, the ratio may be increased up to 1:30.

It is one of the notable advantages of the stainless alloys that their tensile strength is considerably greater than that of ordinary steel. In Plykrome the increased ultimate strength of the composite product is considerably greater than the proportionate thickness of alloy ply. One series of recent tests disclosed that, while the total thickness of the plate was increased seven per cent by applying a veneer of alloy, the ultimate strength was increased 25 per cent.

This new composite metal has been and can be produced with its stainless alloy component of any of the analyses required—14-18 per cent or 28-30 per cent chromium, 18-8 or 25-20 chrome nickel (using Allegheny Metal, Nirosta, Rezistal, KA2S, or other mill makes) Nichrome, Hasteloy, etc. It has the definite advantage of greater ease and economy of fabrication. Since only a small percentage of the total metal thickness is alloy steel, the composite sheet or plate can be handled after the methods common to the fabrication of steel, as, for instance, cutting with an acetylene torch, cold bending, etc.

Detailed information on "Plykrome" may be obtained by writing Industrial Welded Alloys, Incorporated, 225 Broadway, New York, New York.



A specimen of 18-gauge Plykrome which had been exposed for a period of weeks to 1600°F. in a gas-fire furnace, then cooled and heated again. The stainless ply side (at left) shows the 18-8 alloy unaffected. The mild steel backing (at right) has oxidized and flaked almost to destruction

Working Barrel

IVERSON TOOL COMPANY

Iverson Tool Company, Tulsa, has put on the market a new type working barrel designed to prevent sand from wearing cups. There is no danger of stripping jobs as no sand can get to the traveling valve to stick it. The rods can always be pulled and the cups will wear indefinitely, because of a stufifng box in the top of the working barrel, according to the manufacturer. The fluid is forced through a by-pass just under the stufifng box through ports in working barrel and perforated coupling into tubing. The sand which is present in all crude oil settles back into the housing or sand trap and can be dumped out by pulling standing valve up a few inches. If it is not desirable to dump sand or bleed tubing the barrel can be pulled out, taken apart and easily cleaned as there are no close places that woud make cleaning difficult.

The stuffing box is moved on valve stem when rods are pulled and is seated when rods are run in by means of a set collar on valve stem.

The pump has a standing valve puller. It can be pulled or left in the well when the rods are pulled, the gas anchor is not attached to standing valve but is permanent in the pump.

The cups will not turn when pulled out of barrel therefore when rods break it is only nceessary to pull up to where rods are broken, repair and run back and go on pumping. The outer shell is made from high test seamless steel pipe.

Detailed information may be obtained by writing Iverson Tool Company, Tulsa, Oklahoma.

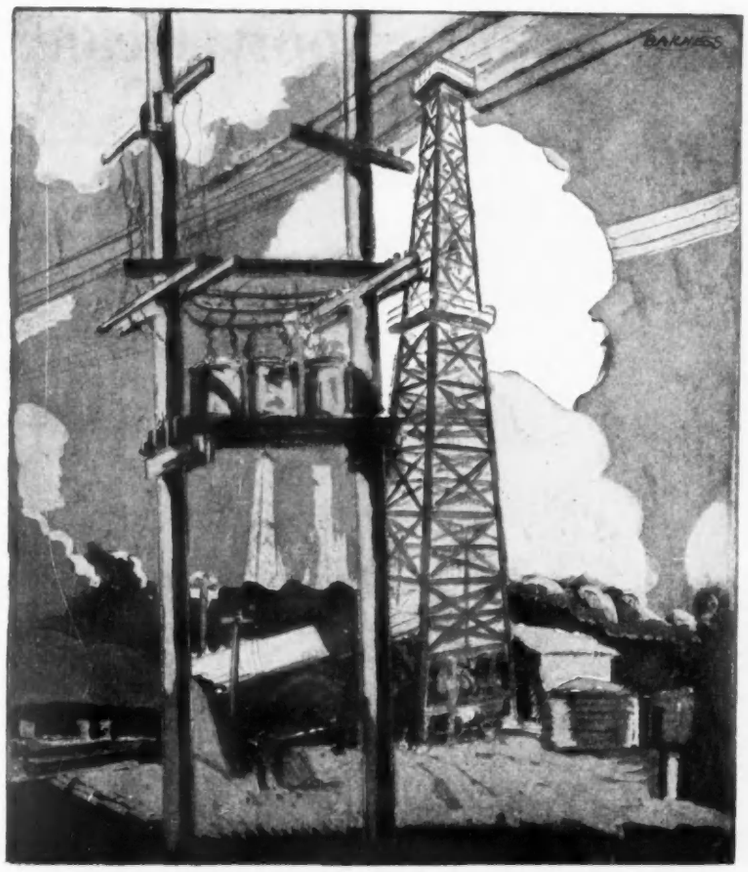
Mud Pump Strainer

WILSON-SNYDER MANUFACTURING CORPORATION

Wilson-Snyder Manufacturing Corporation, Pittsburgh, recently introduced a new strainer for mud pumps called the W-S Strainer.

The strainer is an end suction pattern, arranged for connection to either side of the intake. The purpose of the strainer is to allow the collection of slush pit rubbish in a harmless place—before it hangs up the fluid valves of the pump. This increases the operating time of the pumps and cuts down shutdown time.

Details concerning the strainer may be obtained by writing the company.



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Manufacturer and Supply Dealer Notes

▼ ▼ ▼

Neilan Company, Limited, Los Angeles, recently published bulletin 2000-B describing a new pressure control instrument which contains a number of distinctive features.

Principal among the advanced features of the present control explained in the illustrated catalog are the reducing valve for air or gas operating supply; safety relief valve on operating air or gas reservoir; reservoir drain; gauge for operating air or gas pressure; pressure balanced compound pilot valve; staple for converting from back pressure to reducing service; synchrnonizer; an helical coil which operates the control mechanism; a gauge indicating pressure on control valve diaphram; helical coil for actuating pen arm; pressure setting indicator; an improved method of pressure setting; and a spring winding clock for turning recording charts.

A copy of bulletin 2000-B may be obtained by writing Neilan Company, Limited, 641 Santa Fe Avenue, Los Angeles, California.

Reading Iron Company, Reading, Pennsylvania, announces the consolidation of its general executive and general sales offices in the Terminal Commerce building, 401 North Broad Street, Philadelphia. Mail and other communications for Reading Iron Company should be addressed to the new offices.

C. J. Tagliabue Manufacturing Company of Brooklyn recently announced the promotion of A. F. Rucks to the position of general sales manager. Mr. Rucks has been connected with the Tagliabue Company for 18 years and for the past four years has served as assistant to L. C. Irwin, vice president of the company.

A. M. Byers Company, Pittsburgh, manufacturer of wrought iron products, has taken a six months' option to purchase Canonsburg Steel & Iron Works, Canonsburg, Pennsylvania, makers of black and galvanized sheets.

The Canonsburg company, which is controlled by Edwards Manufacturing Company, Cincinnati, was founded in 1902 and has an annual capacity of 38,000 tons of black sheets and 16,000 tons of galvanized sheets.

It is understood that the company will roll wrought iron sheets in an experimental way for the Byers organization over the next few months.

J. E. Lonergan Company, Philadelphia, has issued a new catalog, No. 400, describing 300 specialties for power plants. These specialties consist largely of valves, oil and water gauges, oil cups, oil devices and whistles.

A copy of the illustrated catalog may be obtained by writing J. E. Lonergan Company, 211 Race Street, Philadelphia.

Continental Supply Company's new catalog will be ready for distribution in the near future. This catalog contains over 1600 pages.

Complete information on all types of equipment for the producing, pipe line, refining and natural gasoline manufacturing branches of the oil industry is included. The catalog is indexed by products and cross indexed by manufacturers. To further the readability of this catalog, Continental Supply Company has grouped information in sections by products in order that complete information on certain products will be found in one section.

International Creosoting and Construction Company, Galveston, Texas, has issued a 16-page booklet, listing the cities in the United States that use creosoted pine poles in business and residential sections. Among the many hundreds of cities named are New York, Chicago, Detroit, Los Angeles, St. Louis, Baltimore, Boston and San Francisco.

Copies of the booklet may be obtained by addressing International Creosoting and Construction Company, Galveston, Texas.

Republic Steel Corporation, Massillon, Ohio, has issued a booklet called "Enduro FC", describing the FC type of stainless steel, one of the most recent additions to the family of stainless steels.

According to the manufacturers, type FC was developed to meet the demand for an alloy combining the free cutting qualities of Bessemer screw stock with the corrosion and heat resisting qualities of Enduro stainless steel. The bulletin contains quite a bit of interesting and authentic information on free cutting alloy.

Copies of the booklet "Enduro FC" may be obtained by writing the company.

C. J. Tagliabue Manufacturing Company has issued a general catalog No. 1000 describing instruments for indicating, recording and controlling temperature, pressure, temperature humidity, moisture, time, gas analysis, condensation and liquid level, as well as describing industrial thermometers, laboratory thermometers and hydrometers and oil testing instruments manufactured by that organization.

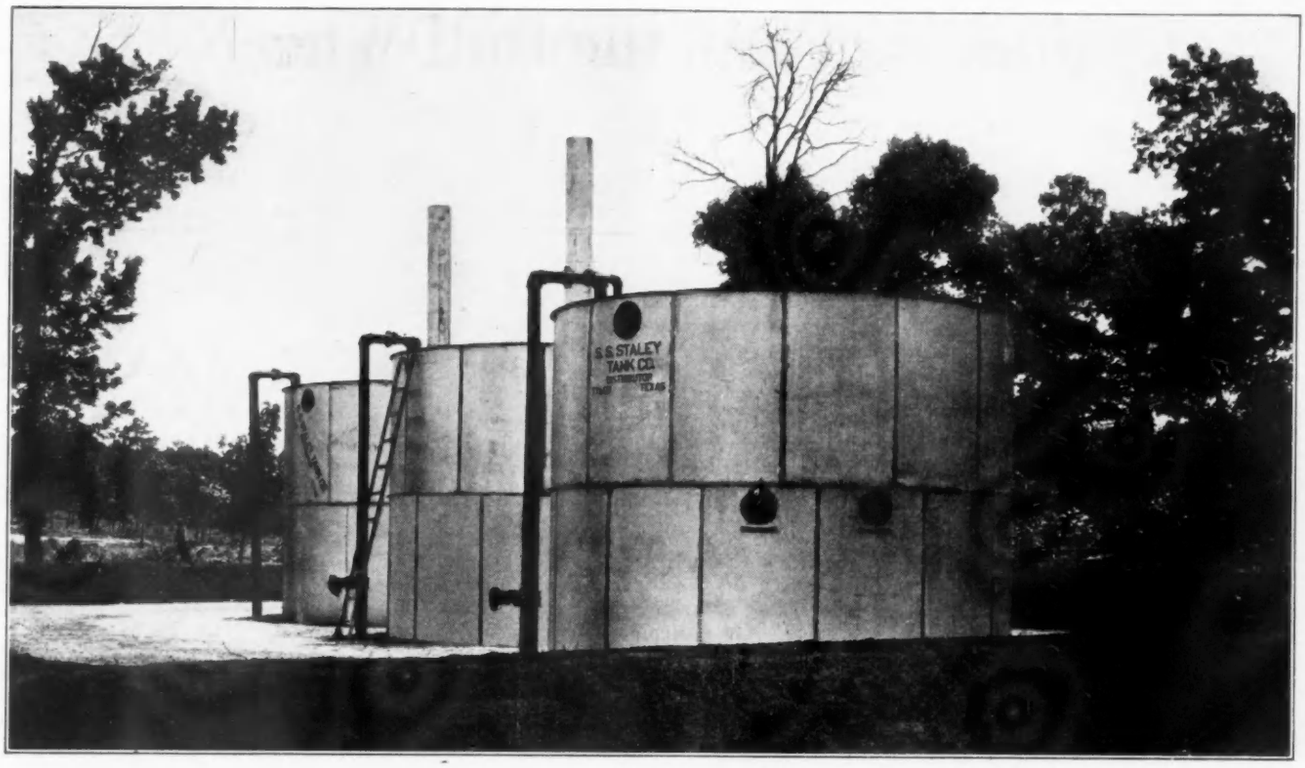
General catalog No. 1000 contains 102 pages of charts, pictures, diagrams and tables used to illustrate and explain uses of the many instruments listed. In addition, the catalog carries along with the instrument descriptions the story of their manufacture.

A copy of the catalog may be obtained by writing C. J. Tagliabue Manufacturing Company, Park and Nostrand Avenues, Brooklyn, New York.

Mercoid Corporation, Chicago, published recently catalog No. H-7, a 112-page, fabricoid bound book describing Mercoid controls, panel units, valves, switches and other related instruments of control. In the back of the book are several pages of wiring diagrams.

Mercoid controls are made for automatic or semi-automatic direct control of motors where the working load does not exceed 10 amperes at 110 volts or five amperes at 220 volts: alternating current or direct current. All types of Mercoid controls employ a sealed glass tube switch containing inert gasses and mercury, thus eliminating exposed conduction surfaces and their resultant open-arcing, oxidation and corrosion.

A copy of catalog No. H-7 may be obtained by writing Mercoid Corporation, 4201 Belmont Avenue, Chicago.



Three 1,000-Bbl. Maloneys used by Golding-Murchison Oil Co., on Blackwell No. 2, Joinerville, Texas

STOP Breathing Losses with Our *Vapor-Pressure* Tanks and You'll MAKE MORE MONEY

Ordinary lease tanks — not built to hold the vapor-pressures generated within the tanks by atmospheric variations — allow the valuable lighter fractions of the oil to escape into the air. It is evident that this reduces the selling value of the oil. It is also obvious that you will make more money if you use tanks which hold the vapors and thus maintain the well gravity and volume of the oil.

Maloney *Vapor-Pressure* Tanks positively restrict the movement of vapors and stand up through long service. 12-gauge, or heavier, rust-resistant Keystone Copper Steel is used throughout. Heavy 2″ angle ties and reinforcements, wide gussets on ties and ladders, and ½″ heat-treated bolts give ample strength. Our special aluminum paint made with an exceptionally durable vehicle. Efficient combination valves are set at 16 ounces pressure and 2 ounces vacuum.

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Sizes: 12 to 10,000 Barrels . . . . . Packed in Steel-Bound Crates for Export

MALONEY

Squeaks From the Bull Wheel

▼ ▼ ▼

A retired oil producer, when asked the secret of his success in life, replied as follows:

"I attribute by ability to retire with a $100,000 bank balance, after 30 years in the oil industry, to hard work, honesty, and economy, and to the recent death of my uncle, who left me $150,000.

Visitor: "Well, Joe, how do you like your new little sister?"

Joe: "Oh, she's all right, I guess, but there are lots of things we needed worse." —Pathfinder.

We can't understand how the ant acquired such a reputation for being so industrious. Nearly all we ever saw were on a picnic.—Thomaston (Ga). Times.

Lady: "Have you ever been offered work?"

Tramp: "Only once, madam. Aside from that, I've met with nothing but kindness.

She doesn't kiss or neck, or anything—she is nobody's fuel.—Colgate Banter.

A newspaper man called on a famous politician at the close of a very busy day. When the reporter had been admitted, the politician said:

"You ought to feel highly honored young man. Do you know that I have refused to see seven of your compatriots already today?"

"I know," replied the reporter. "I'm them."

Motorist—These chickens in the road cause a lot of accidents.

Farmer—But not as many as the chickens beside the driver.

An elderly widower laid his heart at the feet of a modern girl at a night club recently. The poor fellow was trembling with passion, for the girl was as beautiful as Greta Garbo.

"Oh," he sighed, "oh, I'd go through anything for you, darling."

The girl gave him a keen look.

"How much," she asked, "have you got to go through?"

Little Girl: "My, what a pretty baby. How old is it?"

Mother: "Two months."

L. G.: "Is it your youngest.?"

"You are burning the candle at both ends," said a parent, admonishing his spendthrift son.

"But, dad," the youth returned, "you always told me I should try to make both ends meet."

Constable—The accused is an out-of-work plumber, sir, and attended a smash-and-grab raid.

Magistrate—And he failed?

Constable—Yes, sir; 'e forgot the brick.

President Elliott of Purdue University told a story at a tea.

"A varsity baseball coach took one of his best men aside on a fine spring day, and said:

"'George, you are going to pieces. You're pale and thin and flabby. What's happened to you? Are you drinking?'

"'Drinking? Me?' said George. 'I should say not.'

"'You must be smoking, then.'

"'I never touch a smoke.'

"The coach looked at him hard.

"'George,' he said, "it can't be that you're studying?'

"'Well, you see'—George turned very red—'well, yes, I am studying a little. You see—'

"But the coach cut him short.

"'Any more of that, George,' he said, 'and you're off the team.'"—Springfield Union.

Lawyer—It would be better if you could prove an alibi. Did anybody see you at the time of the crime?

Client—Fortunately, no.

A flea and an elephant walked side by side over a little bridge. Said the flea to the elephant, after they had crossed it: "Boy, we sure did shake that thing."

Employer: "Surely, Miss Jenks, you know the King's English?"

Surprised Typist: "Of course he is, isn't he, sir?"

Dad: "Yep, my boy, I'm a self-made man."

Junior: "Gosh, Pop, that's what we all admire about you. You always take the blame for everything."

"Pa, what does it mean here by 'Diplomatic Phraseology'?"

"My son, if you tell a girl that time stands still while you gaze into her eyes, that's diplomacy. But, if you tell her that her face would stop a clock, you're in for it."

Jones: "I really don't know what to do with my week-end."

Smith: "Why, put your hat on it."

THE SHORTEST DISTANCE TO THE

MONEY POINT

Think of the immense amount of money invested in a well from the time of spudding in to the time when the driller stops at the MONEY POINT and the well begins to pay off.

That tremendous cost can be lessened by taking the straightest route to the MONEY POINT. You can drill a straighter hole with an APPLEMAN. Its self-sharpening edges give speed. Its water courses lead direct to the cutting edge, insuring the cuttings being rapidly broken up and washed away in solution.

SAVE MONEY by using APPLEMANS to take the shortest and straightest route to the MONEY POINT.

B.K. APPLEMAN
BEAUMONT, TEXAS

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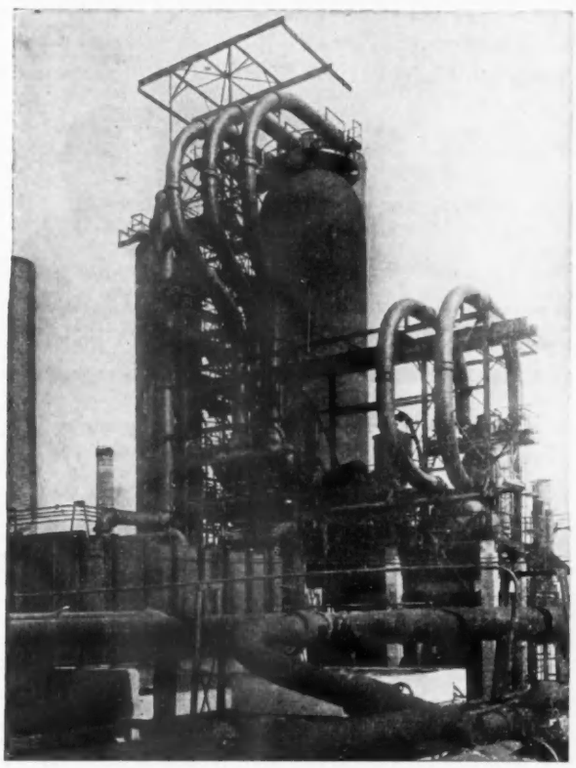
Modern Methods Make Modern Gulf Products



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Cylinder · Engine · Cordage

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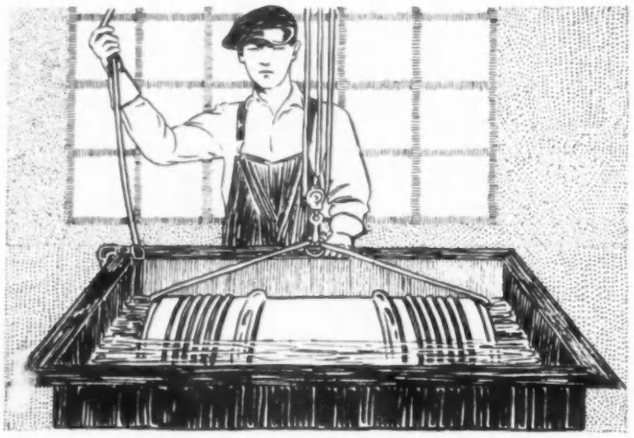

Cuts drum cleaning costs

WITH the method formerly used for stripping old oil drums at a certain Oklahoma refinery, the stripping tank needed recharging every two days. At least eight minutes hand scrubbing was required on each drum.

But, since Oakite materials have been put on the job, this firm is getting amazing results. The Oakite solution lasts a full week. No scrubbing is necessary.

A drum a minute comes from the tank clean to the metal! Stripping costs amount to only a few cents per drum.

Ask our nearest Service Man to call and tell you about Oakite methods for doing this and other cleaning jobs. No obligation.

References:
Report on: Continental Oil Co., Ponca City, Okla.
By: B. C. Browning, 10/10/30.

Oakite Service Men, cleaning specialists, are located in the principal industrial centers of the U. S. and Canada

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Powerful - Dependable

Beebe Bros. ALL STEEL HAND HOIST
SEATTLE, U.S.A. TRADE MARK REGISTERED

A powerful piece of modern machinery which quickly finds its place as a necessary part of the oil producer's equipment. Light weight and easy set-up make it quickly available at any point of operation. Equally satisfactory for light or heavy loads. Positive internal brake (available on no other hoist). Let this sturdy little worker help you with your hoisting problems.

CAPACITY
5 Tons
Straight Line
WEIGHT
110 Lbs.
TWO SPEEDS
4-1 and 24-1
DIMENSIONS
16"x17"x13"
High
PRICE
$80
Steel Tail Hold Yoke $4 extra. Truck Attachment Plate $10 extra.

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THE NATIONAL SUPPLY COMPANIES

OIL

Its Conservation and Waste

By
JAMES H. WESTCOTT

This is a new book on petroleum written especially for the layman. The style of the book is such that it will appeal to the man not familiar with petroleum or the methods of recovering it. It gives a birds-eye view of the industry in its three phases.

Much data in the form of figures supplements the subject matter. These figures cover production, refining, etc., and constitute a good source for general information. There are 62 tables covering a wide range of topics related to the industry.

213 pages—$3.00 Postpaid.

The GULF PUBLISHING COMPANY
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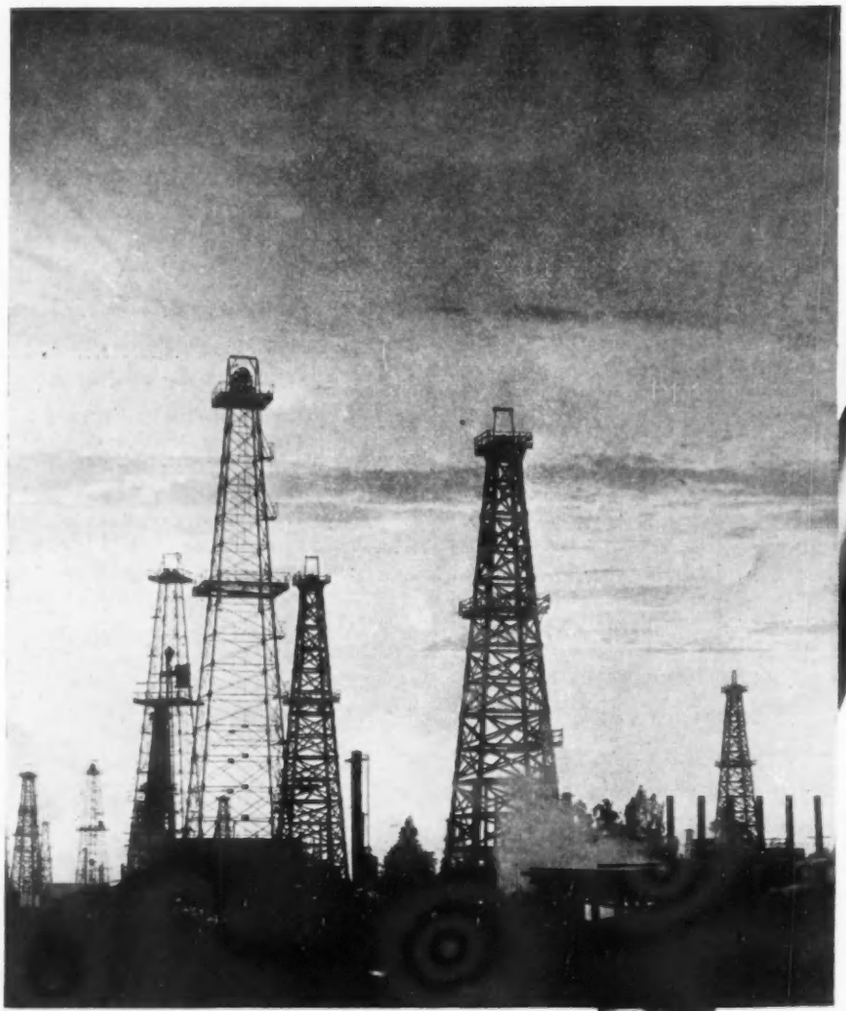
STRAIGHT FACTS.. the 19th of a series and the 4th advertisement on pumps



CLOUDS *that are fading away*

The storm may not be over but it is "lightening up in the West." While the ills of the industry are far from cured, the clouds overcasting the future are drifting away.

In the storm of depression operators have learned many things. In the production branch of the industry they have learned that the perfect INTERCHANGEABILITY of Axelson Pumps and parts has worked remarkable economies for them. They have learned that the super-materials, painstaking workmanship and thoughtful service characteristic of the Axelson organization are factors that they COULD DEPEND ON through boom or depression.

There is an Axelson representative as near as your telephone.

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and other production equipment

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AXELSON OIL WELL PUMPS

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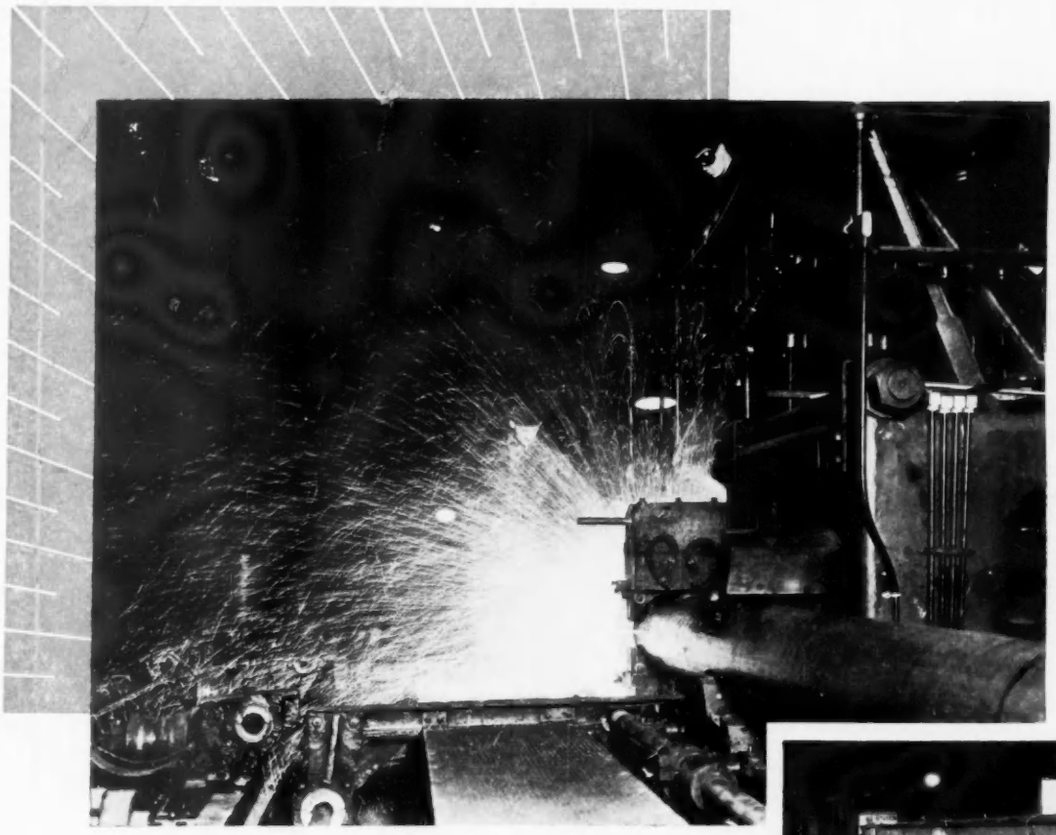
Double Length LINE PIPE



now being produced by the

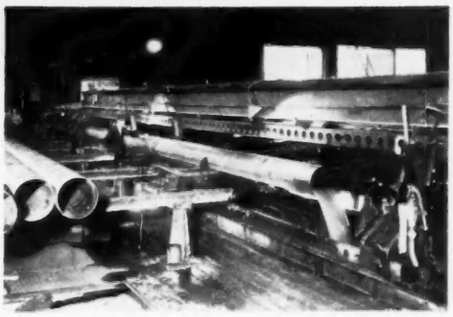
"flash welding process"

in all sizes from 2" to 20" O. D. & 55' maximum lengths

Always in keeping with the spirit of modern progress, the oldest pipe mill in America offers pipe users the advantages of the newest advance in pipe manufacture —the Flash Welding Process.

By this process, the butted ends of two lengths of pipe are electrically heated to a uniform welding temperature,—then forced together under pressure to form a joint that tests as strong as the pipe itself. The rough edges of the flash are trimmed from the joint both inside and outside, after which each double length is hydrostatically tested under maximum pressure.

Line Pipe users will welcome this new "Spang" Double Length Pipe—pipe that makes possible greater economies in shipping, handling and installation costs—a line of pipe available in every size from 2" to 20" O.D. and 55' maximum lengths.



Every length of "Spang" Double Length Pipe produced by the Flash Process is subjected to the maximum hydrostatic pressure test.

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